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ABSTRACT

A third party evaluation was conducted of the first phase, 1976-77, of the three-year Appalachian Maryland Experienced Based Career Education Project (EBCE). During this year, the project provided combined learning activities outside and within the classroom for twenty-four twelfth grade students. These experimental students and twenty-three control students were pre- and posttested with the Career Maturity Inventory Test and the Watson-Glaser Critical Thinking Appraisal, in combination with a Student Profile Sheet. A Context, Input, Process, and Product (CIPP) design was used to determine the interrelationship of procedural and intended elements with product and actual results. Some of the major conclusions were that (1) the support of local constituents and community for EBCE was unequivocally strong and impressive; (2) EBCE students demonstrated exemplary academic progress, and their attitudes towards education generally improved as a result of participating in the program; and (3) in terms of career skills and career decision making, the EBCE students demonstrated substantial career education gains after participating in the project. (Appendixes contain instruments, data, and materials used in the study.) (TA)

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A THIRD PARTY EVALUATION OF THE APPALACHIAN MARYLAND EXPERIENCE-BASED CAREER EDUCATION PROJECT: 1976-77

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Submitted to

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Agency of Appalachian Maryland

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EXECUTIVE SUMMARY

Background

The Office of Educational Research and Field Services, West Virginia University, conducted a third-party evaluation of the Appalachian Maryland Experienced-Based Career Education Project (EBCE), 1976-77. The EBCE Project was administered by the Regional Education Service Agency of Appalachian Maryland with the cooperation of the Allegany County Board of Education. Funds were made available by the United States Office of Education under Part D, Section 142 (C), Vocational Education Act.

During its first year of operation, the EBCE Project sought to provide combined learning activities outside and within the classroom for twenty-four twelfth-grade students. The Project began October, 1976, and after a planning and development phase, students were placed during the second semester (January - June) 1977. In this model, which was developed by the Appalachia Educational Laboratory "(A.E.L.)", Charleston, W.Va., the students spent four days a week at selected career sites and one day at the EBCE Learning Center, where they received instruction from the Learning Coordinators. Students were selected at random from a pool of interested applicants. A Control group of twenty-three students was selected in a similar manner. After an initial week of orientation, the EBCE students were given an individualized learning program, which reflected their academic requirements, basic skills, and career interests. Equipped with a personalized set of objectives and individual activity sheets, the students chose a local site placement, at which they spent anywhere from two to thirteen weeks.

Organizationally, EBCE was implemented by a local Project Director, and staffed by two Learning Coordinators, a Site Analyst, and a Secretary, all of whom received training from AEL prior to their involvement in the Project.

Their functions were coordinated by an ad-hoc Steering Committee, initiated by RESA and composed primarily of representatives from RESA and the local Board of Education. RESA maintained ultimate responsibility for the Project. This Committee responded to emergency problems and coordinated central managerial facets of the Project.

Through such mechanisms as the Community Advisory Council (CAC), a broadly-based group of thirty-five community leaders in business, industry labor, government, and education, the Project identified over fifty potential local career placement sites. At each of these sites, a resource person was chosen to work with the student and to serve as a liaison between the Project and the job site.

Purpose and Design of the Evaluation

The purpose of the evaluation was to determine the EBCE Project's success in meeting its aims and objectives. The Evaluator utilized a Context, Input, Process, and Product (CIPP) design in order to determine the interrelationship of procedural and intended elements with product and actual results. Within this design, the Evaluator established a set of structural guidelines in order to categorize the primary parameters of the Project. In turn, the structural guidelines were sub-divided into Project areas (generalizations of the Project Objectives) and target evaluation questions. These questions, and the attendant instruments, data gathering methods, effectiveness criteria, and primary data sources, became the principal format for deriving conclusions and recommendations.

Before presenting the major conclusions and recommendations, it is appropriate to describe the principal research methods and instruments utilized by the Evaluator. To assess the important aspect of student outcomes, the Evaluator administered the Career Maturity Inventory Test, both the Attitude Scale and the Competency Test. The Watson-Glaser Critical Thinking Appraisal was used to gauge cognitive or reasoning abilities of the students. These instruments, in combination with a Student Profile Sheet, were administered on a pre/post test basis to both experimental and control students. Where valid, Experimental to Control comparisons were made; also conversions to national norms were carried out.

Qualitative and perceptual data were acquired from interviews and questionnaires administered to parents (of the twenty-four EBCE students), employers, school principals and guidance counselors, EBCE Project staff, RESA, representatives of the Board of Education, and the students themselves.

Salient findings from these instruments prompt the following major conclusions about the EBCE Project. The conclusions are categorized by the Project area to which they attend.

A. Community Support

The EBCE Project produced substantial support from the local community. Based on the number and variety of career placement sites, the establishment of the Community Advisory Council (composed of thirty-five dedicated representatives of the major socio-economic and political strata in Allegany County), the direct support of employers and resource persons, and the unanimous endorsement of the parents of the participating students, the Evaluator has concluded that the support of local constituents and community for EBCE is unequivocally strong and impressive.

B. Academic Quality

Precise quantitative measurements of academic achievement were not possible because of the time-frame (sixteen weeks) of the Project during its initial year of operation. In lieu of these measures, the Evaluator examined records and performance criteria of EBCE students and surveyed the attitudes and impressions of various respondents (including students, parents, EBCE staff, Principals, et. al.). In this context, EBCE students demonstrated exemplary academic progress, and their attitudes towards education generally improved as a result of participation in this Program. All twenty-four students graduated on schedule, most with "honor roll" grades. It was conjectured that one of these students would not have completed high school without EBCE. Futhermore, from a procedural standpoint, the Evaluator concluded that the EBCE staff, its Director, Learning Coordinators, and Site Analyst were highly competent. The curriculum and instruction phases were congruent with county standards and generally quite excellent.

It should also be pointed out that as an alternative to measuring academic achievement, the Evaluator administered a Critical Thinking Appraisal, the results of which tend to indicate that after participation in the EBCE Program, the students improved their reasoning or cognitive skills. More specifically, these students gained as a group 6% from pre- to post-test and improved one stanine in the process. Moreover, the degree of their gains on the post-test of the Watson-Glaser instrument approaches statistical significance.

Finally, the important aspect of student motivation to learn was taken into consideration in this evaluation. It was found from students' and parents' perceptions that the EBCE students increased their motivation level toward school as a consequence of EBCE.

C. Programmatic Effects

In terms of career skills and career decision-making, the EBCE students demonstrated substantial career education gains after participation in the Project. This conclusion is confirmed by their scores on the post-test of the Career Maturity Inventory Competence Test, a nationally recognized barometer to career enhancement, and from salient perceptions of employers and resource persons who worked with these students on a daily basis. Generally, the EBCE students learned more about themselves, engaged in more mature decision-making, and were more apt to plan better for their future. Although post-test results on the Career Maturity Inventory are not statistically significant, the gains of the EBCE students are conclusively higher than those of their Control counterparts.

From the standpoint of career attitudes, the EBCE students display slight gains on the CMI Attitude Post-Test Scale. They have a higher group mean than do the Control students on this instrument. However, the degree of gain for the Control students is statistically significant, thus making conclusions about the effect of EBCE on career attitudes dubious and mixed at this point of time. Some degree of certainty, however, is afforded by considering the perceptions of the employers, parents, and students themselves about career attitudes. All three groups stated, on questionnaires probing this variable, that the students' attitudes toward work and toward themselves were substantially improved after their involvement in EBCE.

In a third dimension, the Evaluator deduced that there was a positive relationship between improved employability and participation in EBCE.

D. Organizational Implementation of the Project

Probing the managerial domains of decision-making, dissemination and communication, and replication and development, the Evaluator concluded that in general terms the Project was well managed, implemented, and publicized. Given the experimental and embryonic nature of the endeavor, the EBCE Project was well coordinated at the level of RESA, the Allegany County Board of Education, and the technical staff level. Certain initial dysfunctions in reporting, which were understandable given the dual coordination at the hierarchical level, and decision-making have been alleviated. Also, the initial needs assessment and global planning for the Project have been refined. Lastly, planning for possible integration of EBCE as a permanent feature of the County school system and expansion to other districts in the state of Maryland have been anticipated. During 1977-78, the Allegany County EBCE Project will be conjoined with a larger State Networking Project so that its efforts and accomplishments can bear fruit in other climes.

RECOMMENDATIONS

Based on the major conclusions derived from available data, several summative conclusions were suggested by the Evaluator to further the development of the Project during its second year of operation. The most significant of these conclusions were:

1. The Community Advisory Council should be assigned specific tasks to be carried out by sub-committees. The main function of this group during the second project year should be to advise in an active manner the Project personnel and provide alternative solutions in such typical problem areas as: transportation, site selection, site maintenance, public relations, student participation, community-school relations, and the like. Thus, the CAC should assume a more active role and perform tasks mutually agreed upon by it and the Project personnel.

2. A standard operating procedure should be developed by the Project staff to notify those employers and resource persons whose sites did not attract students. Given the large number of potential sites, it is inevitable that some career sites will not be utilized during any particular Project year. Early notification should be given to those resource persons whose sites are not being utilized in order to maintain proper communication and foster continued cooperation for future utilization of that site.

3. The Comprehensive Test of Basic Skills (Form S, Level 4) should be administered on a pre/post-test basis to the participating students, utilizing the reading, mathematics, science, and social studies sub-scales. The CTBS will provide an important measure of the academic dimension of EBCE. Even more importantly, the pre-test results can serve as valuable diagnostic and prescriptive data for the Learning Coordinators in developing the individual education plan for the students.

4. This year's (1977-78) management plan should reflect the restructured goals and objectives, and the activities and performance criteria should be detailed systematically within the four major Project goals: Project Management, Student Outcomes, Program Outcomes, and Demonstration/Dissemination. The Evaluation Team further recommends that the Project objective be refined in light of these established goals so as to insure measurability and performance standards.

5. Internal public relations with school personnel at all levels should be maximized so that these personnel are continually aware of not only the aims of the Project, but also the status and outcomes of the students as they participate in EBCE. A concerted effort by the Project staff must be directed toward regular communication with the principals, guidance counselors, and teachers in the home school. This is especially important in fostering coordination and support for the new venture.

6. During the second year, considerable attention must be given to continued planning and development to meet the unique conditions of the local school system. Such matters as cost-benefit (per-pupil ratio), transportation scheduling and expenses, normalization, and integration within the current programmatic climate should be considered.

7. Lastly, the present EBCE Project administrators should assist RESA and the Maryland State Department of Education in their joint efforts in "networking" EBCE throughout the state. This entails maximum cooperation and availability of the present Project staff to share their expertise with other potential adopters.

Coda

The EBCE Project was a highly successful venture, given its original aims and broad objective. Students demonstrated many tangible benefits and evidenced enthusiastic and positive attitudes towards the Program. It is strongly recommended that this worthy Project be given maximum exposure so that as many educators, citizens, and community representatives become acquainted with its impressive accomplishments and beneficial aims.

ACKNOWLEDGEMENTS

The third-party evaluators appreciate the cooperation and assistance of the administrators and staff of the Regional Education Service Agency of Appalachian Maryland. Mr. George Allen, Executive Director, Mr. James Wilson, Project Coordinator, and Dr. Gene Hall, Evaluation Coordinator were particularly helpful in all phases of the evaluation. A special note of thanks is expressed to the EBCE Project Director and her staff: Ms. Dana George, Director; Mr. Tom Elliott and Mr. John Valenzano, Learning Coordinators; Mr. James Moore, Site Analyst; and Ms. Leona Hirtle, Secretary.

The Allegany County Board of Education has also been extremely helpgul in facilitating the evaluation of this Project. The representative of the local school system, Mr. Glenn Hanna, helped to expedite many critical phases of the evaluation.

The evaluators equally appreciate the cooperation of the participating principals, guidance counselors, and teachers in Allegany County. Likewise, we express a note of gratitude to members of the Community Advisory Council, participating employers and resource persons, and others in the local community whose efforts were indispensable to this Project.

Most especially, the evaluators congratuate the 24 EBCE students and their parents for their perseverance and admirable contribution to this endeavor. Moreover, the students who volunteered to form the control group should also be acknowledged.

Within its own ranks, the Office of Educational Research and Field Services extends its appreciation to Mr. Joseph Mace, research associate, for his technical assistance in this evaluation. Mr. Mace devoted innumerable hours to assimilating and synthesizing the data. Mrs. Wilma Phillips and Miss Rebecca Maurer typed the final document, and their contributions are greatly appreciated.

The EBCE Project was truly a group effort. Both the quantity and quality of participation from all parties were outstanding.

FLS
RAH
JJP
September, 1977

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A THIRD-PARTY EVALUATION OF THE APPALACHIAN MARYLAND EXPERIENCE-BASED CAREER EDUCATION PROJECT: FIRST-YEAR REPORT

CHAPTER 1

INTRODUCTION, BACKGROUND, AND INITIATION OF EBCE.

The concept of Career Education has emerged within the United States as a promising alternative to traditional learning approaches at all levels, primary, secondary, and post-secondary. During the 1970's some concerned critics of American public-school education have called for a revolutionary re-awakening and re-evaluation of educational methodology and content so as to produce a focus upon "relevance" both with regard to student interest in learning and the eventual application of knowledge and skills to useful, satisfying careers in business, industry, and other services to society. Thus Career Education has attracted the attention of every major sector of public education in America. At the same time, its novelty is such that questions concerning its philosophy, its efficient application, and the validity of its evaluation have not been fully answered. This present report examines the central features of one representative Career Education project and measures its impact as an alternative educational endeavor.

The Office of Educational Research and Field Services (ERFS), West Virginia University has an abiding interest in all the educational programs and projects which are undertaken in the Appalachian Region. The Office is reqularly involved in innovative and experimental programs and assists school systems and other agencies in planning and evaluating special programs.

The Office demonstrated its particular interest in such programs in its capacity as the third-party evaluator of a 1975-76 Career Education project administered by the Regional Education Service Agency based in Parkersburg, West Virginia.* Among the observations and recommendations which ERFS made during the course of its evaluating this project was the conviction that the success of such an undertaking is dependent upon the harmonious cooperation of a broad representation of leaders and administrators in education, business and industry, students, and parents; further, that an ideal structure for implementing a Career Education model is provided by a multi-county organization such as a Regional Education Service Agency (RESA). Both of these favorable conditions appeared to be present when the RESA of Appalachian Maryland initiated the present Project in Experience-Based Career Education. Therefore, when ERFS was invited to participate as the Project's third-party evaluator, ERFS accepted the invitation with alacrity.

This present report deals with the first (annual) phase of a three-year Career Education model. It supplements and supersedes an ERFS interim report dated March 31, 1977.** Examining the major accomplishments and shortcomings of the Project in a systematic and extensive manner, the report has four major sections, which detail and analyze the salient characteristics and the significance of the Project, as follows:

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*The final report on this project, by Floyd L. Stead and Richard A. Hartnett, is entitled A Comprehensive Evaluation of the Region V, Regional Education Service Agency, Career Oriented Educational Program: 1975-76 (ERFS, West Virginia University, September 6, 1976, 240 pp.).

**Floyd L. Stead and Richard A. Hartnett, Interim Report, Appalachian Maryland Experience-Based Career Education Project, 49pp.

1. An examination of the general nature of Career Education, the significant distinctiveness of the Experience-Based Career Education concept, and the specific historical conditions of the Appalachian Maryland Project.
2. A description of the evaluation format, including its purpose, scope, design, procedures, and statistical treatments.
3. A presentation of specific conclusions based upon the data collected.
4. Recommendations for the Project's improvement and its replication.

BACKGROUND TO THE EVALUATION

The Career Education Concept

A striking feature of Career Education is its status as an alternative approach to traditional educational orientations. Initial interest in it was stimulated by Sidney P. Marland, Jr., who issued a challenge for reform to a gathering of the National Association of Secondary School Principals in January 1971. Marland, who was then the United States Commissioner of Education, stressed the need for a practical alternative to the irrelevancies of general education,and the preoccupation of public education with meeting college-entrance requirements. He proposed Career Education as a new unity, which, by introducing a blending of vocational, college-preparatory, and general education, would instigate true reform. His emphasis was upon secondary schooling, but he felt that all grade levels and subject areas could be beneficially affected.

Marland was uncertain regarding the eventual implementation and structure of this new concept in schools and communities. However, he wisely insisted that its organization "must be left to the decision of local school boards, teachers, students, the business community, labor, and others directly involved"--a broadly cooperative venture. He added that much would "depend upon State and local administrative leadership" for its successful implementation.

Expanding upon the tentative forms which Career Education might assume in the schools, Marland logically distinguished between primary-school students, whose introduction to Career Education would emphasize an increasing awareness of the diversity of occupational categories and related skills, and secondary-school students, whose formal education would culminate with a practical acquaintance with work-related skills and some "hands-on" experience at actual job-sites.

Appropriate revisions in school curricula would call for changes reaching into even basic subject areas--i.e., mathematics, social studies, language arts, and science--so as to provide a very visible focus upon an individual student's career aspirations. This approach addresses itself to the key issue of student motivation: he "would not be learning just for learning's sake or because someone ordered him to, but because the subjects he was studying would bear directly and specifically on his planned career."

Evolution of Career Education

Kenneth B. Hoyt believes that Career Education can be traced as far back in the history of American education to the Morrill Act of 1862.*

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*In Career Education: Contributions to an Evolving Concept (Salt Lake City, Utah: Olympus Publishing Company, 1975), pp. 385-386, Hoyt claims that the idea of Career Education was "stated as one goal of American education in explicit form by the Morrill Act of 1865." The Associate

Hoyt also points out that the idea has been well illustrated by such men as Grant Venn (1964), Rupert Evans (1968), James Rhodes (1970), and Roman Pucinski (1971). Marland, perhaps, was particularly influential in fostering the idea as a national priority because of his prestigious position and the timing of his pronouncement. During the early 70's there was considerable concern regarding educational accountability, for making education significantly practical. Career Education was viewed, by many as a sensible and natural approach to this concern. A high rate of unemployment and galloping inflation induced many political and educational leaders to seek fresh approaches to prepare high school students for selecting and maintaining jobs; thus the practical concept of work was linked more closely to the notion of basic education. This educational inquiry was furthered by the U.S. Office of Education's allocating several million dollars for Career Education demonstration projects.

The resultant interest in Career Education was to be observed in the form of impressive support tendered by major sectors of our society. Virtually every State department of education has conducted conferences on Career Education, and several States have instituted formal Career

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Commissioner of Education for Career Education not only errs in assigning the date of "1865" to this act, but also creates a false impression about the actual intent of the Morrill Act. This piece of legislation comes no closer to being explicit about "career education" than do many other federal acts, such as Bankhead-Jones (1935) or the Nelson Amendment (1907) which provide various forms of monetary assistance and federal encouragement to land-grant colleges in offering specific agricultural and mechanical curricula.

Education programs in large school districts. In promoting Career Education projects the federal government has provided an enormous infusion of direct monetary assistance to school districts.* As the following statement reveals, the United States Office of Education has demonstrated enthusiastic commitment to cooperative Career Education.

> We have reaffirmed the tradition of placing primary responsibility for educational development in the states, monitor the developmental resources .... We have attempted to elevate the essential place of the career counselor in the totality of the concept. We have removed the funding authorities for program support from reliance upon vocational education and other authorities, thereby hoping to diminish the still prevalent confusion between career education and vocational education. We have endorsed the present organizational structure of the Office of Career Education, reporting directly to the Commissioner of Education .... We have endorsed the very essential work of the National Institute of Education in its research, analytic and dissemination responsibilities relating to career education and agree with the high priority given to career education in that agency both in the statutes and in the agency's performance.**

With this kind of support the idea of Career Education has spread within a few years, across the United States: from the top of the national educational hierarchy (USOE) down to local school administrations, in both large (e.g., Los Angeles) and small (e.g. Mesa, Arizona) educational settings.

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*See, e.g., Stephen S. Feit, "Career Education and Its Impact on Academic Achievement and Career Development" (unpublished doctoral dissertation, West Virginia University, 1973), p. 5.

**"Interim Report with Recommendations for Legislation" (National Advisory Council for Career Education, November 1975), p. 2.

Subsequently Dr. Marland, in a new role as President of the College Entrance Examination Board, has arisen to reaffirm his conviction that Career Education holds great promise for benefiting individuals and society; and he seeks to assess its progress. In an address before the Commissioner's National Conference on Career Education, delivered on November 8, 1976 at Houston, Texas,* he emphasized that learning need not be confined to in-school and in-college experiences. He went on to remark, "Career Education's message...remains a sincere call for reform, that says... work is not mean or repulsive, and that education has a very essential part to play, at all grades, and for all ages, in helping people ready themselves for work--intellectually, socially, economically, emotionally, yes, spiritually...it also asks for reform in those other places that contribute so much to the education of our people outside the classrooms. It asks for new commitments from business, labor and industry, from governments at federal, state and local levels. It asks for a larger order of humaneness from the American people altogether" (page 1). He developed a theme of necessary and beneficial cooperation on the part of business, labor, industry, government, education, and the American public. Anticipating the wariness of some businessmen, he assured business of these eventual advantages from Career Education: (1) improved manpower, (2) enhanced work environments (causing a reduction in unemployment and welfare), and (3) greater consumer purchasing-power. But, in addition, he referred to a new sense of selfless social concern on the part of American business. He refuted the claim of some that organized labor is opposed to Career Education. He looked to the support of industry, citing, as an example, the cooperative efforts of General Motors Corporation, whose Chairman pronounced: "General Motor's support of quality Education includes the concept of career education in America's schools and colleges by direct action." He reviewed the passage of favorable legislation on the part of both the federal and state governments, concluding with the encouraging observation that some "school systems heavily engaged in Career Education have found they can do the job for a little as $2.00 per student to meet the new costs of increased counseling services, faculty development, and instructional materials." With regard to academic achievement within educational systems, he pointed to demonstrated gains in reading and mathematics, produced under the stimulus of Career Education, concluding that "the evidence tells us that newly motivated young people learn better, when they relate the curriculum to their personal destiny." When he examined the attitudes of the American public-at-large, he alluded to Gallup Poll evidence of "rising expectations...for relating work to education" and of the wish that schools provide assistance in choosing and preparing for useful careers.

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*Published by the National Advisory Council for Career Education as Career Education Update, undated, 16 pp.

Yet, Dr. Marland tempered his address with desirable balance. "The high place of the liberal arts, as the custodian of the underlying values and wisdom of a developed people is threatened.... The colleges must respond with a new harmony, sustaining the high place of the liberal arts in our society and relating these essential learnings usefully to the occupational expectations of the learner. It is not a question of _either_ liberal arts _or_ occupational development, it must be both. That is the essence of career education" (page 12). Finally, he remarked that, although almost fifty-seven percent of American school districts were providing some Career Education development for faculty, still, a mere three percent of the school districts appeared to be fulfilling all of the criteria conducive to a comprehensive Career Education program. But his final note of optimism was that sixty percent of the districts had asserted that Career Education is important or essential and were taking steps to implement it in their systems.

Apparently a big fear of Marland and other enthusiastic proponents of the Career Education concept is that, as it is encouraged and broadly expanded, American educators might lose sight of its revolutionary, all-pervasive aspirations and goals. Larry J. Bailey addresses this issue unequivocally*: "My personal fear is that career education will be implemented without education ever being 'reformed'.... True reform ... means moving beyond simple infusion of career education into an existing curriculum. Change at the Restructuring and Value Orientation levels involves, for example, shifts from schooling to education, from teaching to learning, from vicarious to experiential learning, from content to process objectives, from singular to pluralistic delivery systems."

Goals and Objectives of Career Education

Various definitions of Career Education have been put forward. Kenneth B. Hoyt succinctly yet comprehensively defined it as "the total effort of public education and community to help all individuals become familiar with the values of a work-oriented society, to integrate those values into their personal value systems, and to implement those values in their lives in such a way that work becomes possible, meaningful, and satisfying to each individual."* He developed from this definition a list of three significant objectives, which are dependent upon Career Education's goal of preparing all students: (1) to help all individuals to become familiar with the values of a work-oriented society; (2) to encourage individuals to integrate their work values into a personal value structure; and (3) to assist individuals in implementing work values in their lives.**

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*Next Steps in Career Education (National Advisory Council for Career Education, Washington, D.C., November 18, 1976), p. 21.

Programmatic Assumptions

To explain the education-specific conditions of Career Education, several programmatic assumptions have been advanced, the most significant of which are the following:

1. Student motivation increases in direct proportion to the clarification of a student's understanding of the relationships between education and work.
2. There is no one supreme learning strategy or approach. A variety of educational stimuli is advantageous.
3. Success in one's work is dependent upon the acquisition of vocational skills. There is less and less demand for unskilled workers.
4. The maturational patterns of Career Education differ for each individual.
5. The elementary school years are critical for the development and formation of work values and personal values.
6. Full freedom of occupational choice is impeded by job stereotyping, especially for females and members of minority groups. This hindrance can be reduced through specific programmatic intervention strategies.
7. The same general strategies used in reducing worker alienation in industry (see Herzberg and Maslow) can be applied to reduce worker alienation among students and teachers in the schools.

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*Hoyt, p. 156.

**Hoyt, pp. 157-58.

8. Career decision-making skills can be learned by students, to fortify their career development.

9. Work can be satisfying and can stimulate self-understanding and self-importance through concrete accomplishments.*

General Effects of Career Education for Education

The leading proponents of this movement stress its overall beneficial effect on the American school curriculum. They point, first of all, to its potential for improving the quality, quantity, and variety of vocational education. They envision a curricular enhancement through a wider variety of course options, accompanied by a de-emphasis upon differentiated college-preparatory, general-education, and traditional vocational education offerings. Secondly, several modifications of the existing structure of instructional curriculum are necessary to allow for these features: a greater utilization of educational technology; increased participation of students, teachers, parents, and representatives of business, industry, and labor in setting educational policy; credit for student experiences outside the conventional curriculum; assessment of students on a performance basis in lieu of the Carnegie Unit method; year-round school; greater flexibility of scheduling, to encourage teachers to develop career strategies in their classrooms; and improved career guidance, counseling, placement, and follow-up functions in the schools. In addition, career educationists advocate a complete overhaul of teacher education, in order to incorporate Career Education at all educational levels.**

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*Based upon Hoyt, pp. 22-26.

**Hoyt, pp. 30-32.

Specific Learner Outcomes

The USOE has identified nine learner outcomes to be effected by Career Education.

Career Education intends to produce students who are:

1. competent in the basic academic skills required for adaptability in our rapidly changing society;
2. equipped with good work habits;
3. capable of choosing a meaningful set of work values, leading to a desire to work;
4. equipped with career decision-making skills, job-hunting skills, and job-getting skills;
5. equipped with vocational personal skills at a level which will allow them to gain entry into and attain a degree of success in the occupational society;
6. equipped with career decisions which they themselves make, based on the widest possible set of data concerning themselves and their educational-vocational opportunities.
7. aware of means available to them for continuing and recurrent education, after they will have left the formal system of schooling;
8. successful in being placed in a paid occupation, in further education, or in a vocation which is consistent with their current career education;
9. successful in incorporating work values into their total personal value structure in such a way that they are able to choose what, for them, is a desirable life style.*

Career Education, in sum, is a still-developing educational movement, which is directed towards the infusion of practical work values and career preparation into all phases of the American educational system. It is a comprehensive approach with definite pragmatic overtones; it is aimed at directing a large portion of the K-12 curriculum towards the career aspirations and needs of that majority of students who seem to require an alternative to the entrenched college-preparatory and general-education offerings. It focuses upon the significance of work as the conceptual cornerstone of education.

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*Hoyt, p. 29.

Experience-Based Career Education (EBCE)

An important step towards the "experiential learning" phase of Career Education is the development of Experience-Based Career Education models, sponsored by the National Institute of Education as "a new approach to secondary education." Thus far, four HEW-approved regional laboratories have appeared in the forefront of this important experiment: namely, the Appalachia Educational Laboratory, Inc. of Charleston, W. Va.; the Far West Laboratory, Inc. of San Francisco, Cal.; the Northwest Regional Educational Laboratory, Inc. of Portland, Ore.; and Research for Better Schools, Inc. of Philadelphia, Pa. The National Institute of Education and these four educational laboratories have collaborated in the development of this new approach in order "to help bridge the gap between the classroom and the community."*

EBCE is described as a system which "combines learning activities outside and within the school into a balanced, comprehensive, individualized program for high school students" (ibid). Put clearly and succinctly, the system is meant to function thus: "The community is analyzed for its potential as a learning resource. Student experiences in the community are then carefully planned, supervised, and evaluated. Students learn subject matter normally studied in the classroom, but they learn through the practical application of academic disciplines in the workaday world.

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*A Comparison of Four Experience-Based Career Education Programs, (The National Institute of Education, HEW, Washington, D.C., 1976), p. 1.

They explore important new dimensions about themselves and potential careers, and they learn how to make informed career decisions" (ibid).

The EBCE concept is still young. After its inception under the auspices of the U.S. Office of Education in 1971, its development as an operational alternative for high school students has been fostered by the four above-mentioned regional educational laboratories. Each of the regional laboratories has devised a distinctive EBCE model; yet, guided by the same philosophic approach and goals, all of them have produced operational formats which are close in conformity with one another. Thus far, they maintain that their evaluation results have clearly indicated that EBCE does provide an effective educational alternative for senior high school students.

A comparison of the four models reveals that they can be "synoptically" broken down into four major segments: curriculum, employer/community participation, guidance, and management. They stress the need for student awareness of the direct correlation between formal course-learning and the practical utility of such learning in the real world of work; and they suggest that, because of their heightened motivation, together with individualized curriculum adjustment, EBCE students can be expected to perform well academically in addition to obtaining useful on-site job-experience. Furthermore, broad-based, cooperative efforts outside the schools, with key roles being performed by special counselors and program managers, enthusiastic parents, and participating employers, are an essential ingredient.

As of December, 1976, more than 80 different educational agencies in forty-six states and the District of Columbia were operating or planning

EBCE programs, with the four original models developed by the regional laboratories. These programs assume the form of Demonstration Sites, Pilot Sites, Market Demand Sites, or Vocational Education Act-Part D Sites.

The particular model utilized in the current Project, within the RESA of Appalachian Maryland, has been devised by the Appalachia Educational Laboratory (AEL). The rationale behind the Laboratory's imposition of such a model can be gleaned from the _Final Outcome Evaluation Report: Demonstration and Implementation Sites_ of September 30, 1976.* The report reveals that, after three years of development, trial, revision, and refinement, the resultant AEL/EBCE program was implemented as seven demonstration sites, located in Georgia, Louisiana, Iowa, New York (three sites), and West Virginia.** The program was activated during two successive semesters at two of these sites, but only during the second semester at the five other locations. The results indicate that the EBCE students generally experienced positive changes in attitudes towards various aspects of the learning environment and, similarly, towards career maturity. On the other hand, with regard to EBCE-student performance in the areas of basic skills and career knowledge/competence, the results were mixed. Finally, it was determined that involved parents and employers reacted positively to EBCE, the parents being enthusiastic but the employers showing some reservations. On the whole the report concluded that "the implementation of EBCE as a viable alternative to the traditional secondary programs has been demonstrated" (p. 143).

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*Authored by Joe E. Shively and Phyllis Kessel (Experience-Based Career Education, Appalachia Educational Laboratory, Charleston, W.Va.).

**As of December 1976, the AEL model was adopted for implementation in twenty sites within fourteen states.

INITIATION OF THE APPALACHIAN MARYLAND EBCE MODEL

In contrast with other Career Education models, the Experience-Based Model focuses on adolescents (ages 13 - 18); it is meant to provide business and industry settings for junior and senior high school students who might benefit from an alternative to the traditional school setting.

The EBCE Project of the Appalachian Maryland RESA began in August 1976. During the following month five staff positions for the EBCE program were established and duly advertised. After extensive recruiting and screening, the hiring of these key personnel was completed by October 1976. The individuals who were chosen, together with their titles and responsibilities, are the following:

Dana B. George, Project Director

Responsibilities:

a. to supervise the overall program;
b. to provide a bridge between career-oriented and academic-oriented educational activities;
c. to coordinate the efforts of the Project staff in curriculum development;
d. to utilize appropriate supervisory staff in developing academic activities;
e. to work with regional and local career task-forces;
f. to perform other duties as assigned by Project supervisory staff.

James W. Moore, Placement/Site Analyst

Responsibilities:

a. to provide students with the opportunity to be exposed to multiple experience sites;

b. to provide opportunities for students to perform non-paid work tasks and observe adults in their work involvement;

c. to maintain liaison with community experience sites and personnel;

d. to write functional task-analysis statements

e. to interview individuals to work with EBCE students;

f. to compose the Experience Site Learning Guide;

g. to analyze the community for the availability of cooperating experience-sites and learning-situations;

h. to perform other duties as assigned by the Project Director;

i. to participate in appropriate orientation and training programs locally and at Charleston, W. Va.;

j. to learn and implement duties of other Project personnel.

Raymond T. Elliott and John Valenzano, Learning Coordinators

Responsibilities:

a. to deliver, teach, monitor, and evaluate an EBCE student's individualized program of studies;

b. to provide students with skills required to make effective career decisons;

c. to provide the means for expansion for EBCE students' career aspirations;

d. to participate in appropriate orientation and training programs locally and at Charleston, W. Va.;

e. to learn and implement duties of other Project personnel;

f. to perform other duties as assigned by the Project Director.

Leona M. Hirtle, Secretary

Responsibilities:

a. to handle minor accounting matters;

b. to handle routine matters which may arise in the absence of a supervisor or principal;

c. to review simple accounts, reports, payments, and other documents for completeness, accuracy, and conformity with established procedures;

d. to cross-index and file documents, cards, and correspondence;

e. to locate filed material;

f. to proofread typewritten and printed materials;

g. to understand the operation of school or office;

h. to represent the school system adequately in public contacts;

i. to receive and process telephone messages;

j. to relieve a receptionist as the occasion might require;

k. to open and distribute mail;

l. to work well with others;

m. to perform other duties as assigned by an immediate supervisor or principal.

These staff members participated in a requisite five-day Training Session, conducted by the Appalachia Educational Laboratory from October 11 through 15, 1976, at Charleston, W. Va. The major purpose of this Session was to orient the staff to the professional roles and functions to be performed within the adopted Project model; this is the "high fidelity model," successfully demonstrated in Kanawha County (wherein Charleston is located).

Administration

The current EBCE Project is managed principally by the Appalachian Maryland RESA. The RESA, however, works in concert with the Allegany County Board of Education in administering the Project at the local level. All of the above-listed staff-members of the Project are employees of the local Board of Education, although supported by the HEW Project Grant. All major personnel policies and regulations which affect the staff emanate from this local Board. For the joint coordination of the EBCE program with the RESA, the Board appointed its Pupil Personnel Supervisor to serve as its representative. Ultimate responsibility for the management of the Project lies with RESA's Executive Director, who delegated specific responsibility for the coordination of the Project to the RESA EBCE Coordinator. Also, the RESA Research and Evaluation Coordinator was given the assignment of overseeing the general internal and external assessment of EBCE.

In theory, RESA is responsible for regional coordination and dissemination, fiscal control, reporting, and evaluating. The local Board, on the other hand, provides facilities and direct administration of EBCE through special staffing arrangements with RESA. In practice, EBCE is administered by a jointly-created Steering Committee, whose membership includes the RESA Executive Director, the RESA EBCE Coordinator, the RESA Research and Evaluation Coordinator, the RESA Financial Manager, the BOE Pupil Personnel Director, and the EBCE Project Director. The interlocking structure of the EBCE Project is depicted in the accompanying organizational chart, Figure 1.

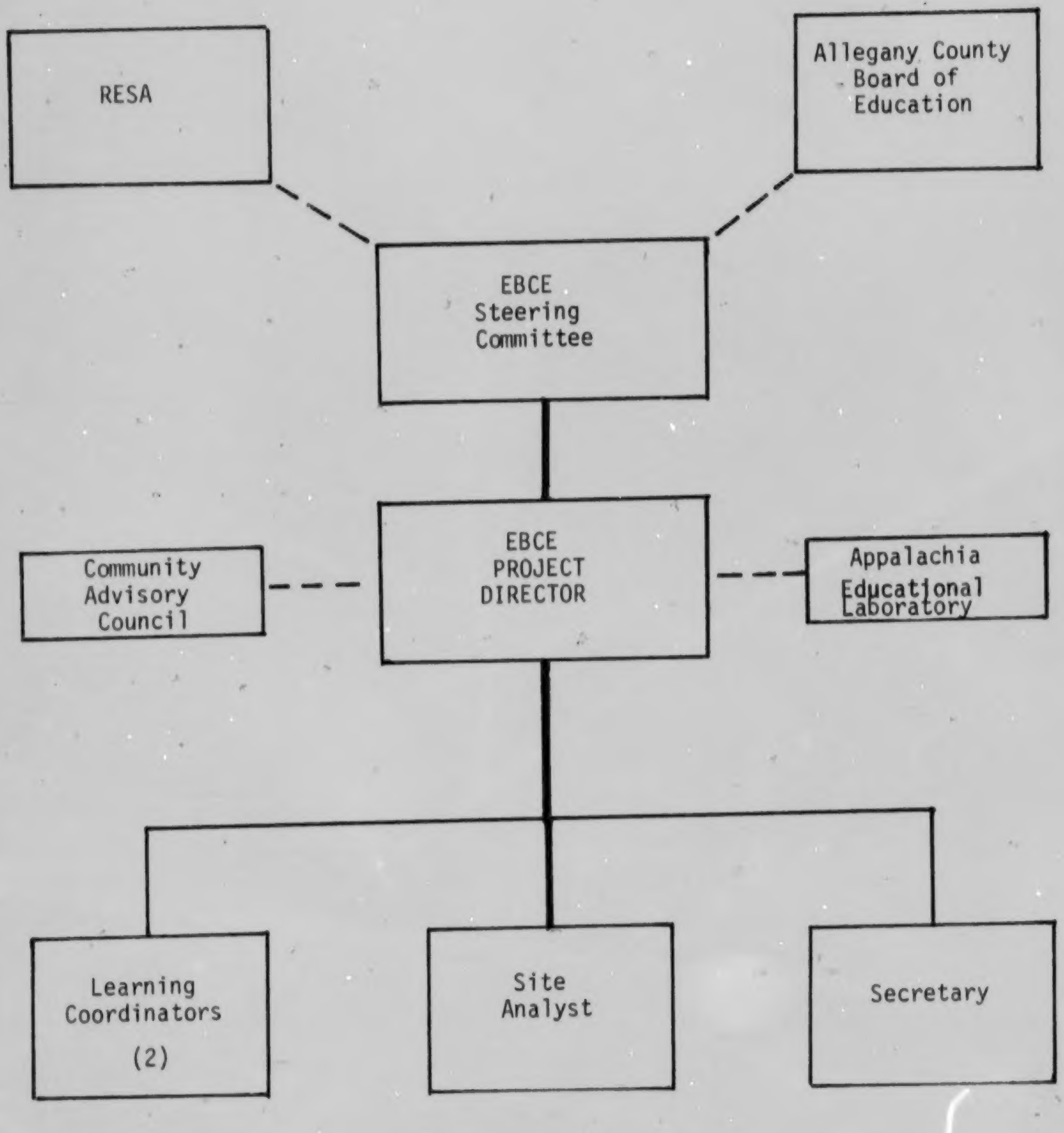
RESA
Allegany County Board of Education
EBCE Steering Committee
Community Advisory Council
EBCE PROJECT DIRECTOR
Appalachia Educational Laboratory
Learning Coordinators (2)
Site Analyst
Secretary

Figure 1
EBCE Organization

The Steering Committee was established to respond to problems which might arise and to coordinate central managerial facets of the Project. It was to meet regularly (twice a month) to consider planning and general development of the Project. However, a desirable flexibility was not precluded: many decisions could be made by Project staff on an ad hoc basis. Depending on the nature and magnitude of an issue, the Project Director was to consult with RESA representatives and/or BOE personnel in the day-to-day administration of the Project. Appropriate records of Project activities were to be maintained by the Project Director. The Project Coordinator, a member of the RESA staff, was to sit on the Steering Committee and to assume the major responsibility for formal reports to the U.S. Office of Education. He also was to provide essential dissemination and planning services conducive and contributory towards systematic development and expansion of the local Project. During the Project's first year of operation, because of occasional uncertainty as to whether the BOE or the RESA has immediate responsibility for or precedence with regard to a given issue, the Project Director, in fact, has had to effect a judicious balance in decision-making, on a trail-and-error basis. Such problems are minimized by the existence and operation of the Steering Committee, which coordinates the dual, sometimes disparate concerns of the RESA and the BOE. Looking to the obviation of obstacles in the Project, ERFS has recommended (in the above-mentioned Interim Report) that both the BOE and the RESA invest the Steering Committee with greater administrative responsibility for the general implementation of the Project.

Establishment of Learning Center Facility

The EBCE Learning Center, which was established on October 18, 1976, moved its headquarters to the Cumberland Kindergarten Center on January 20, 1977. This location is in the northern outskirts of the city (Cumberland, Md.). The Learning Center contains appropriate career materials and two learning stations, where the Project Learning Coordinators work with EBCE students individually.

Community Advisory Council

Because of the necessity of involving a broadly-based, well-balanced representation of community leaders in a successful EBCE program, an Advisory Council was formed during the Project's initial phase. The Project Director and the Supervisor of Pupil Personnel for the Allegany County Board of Education sought businessmen, industrialists, labor leaders, school administrators, local government officials, and other community leaders and representatives for membership on this Council. When its first meeting was held on November 19, 1976, the Council had thirty-five members. It addressed itself to promoting the EBCE program in the local community.

General Objectives

The motivating philosophy of the present Project stems from the following student-centered, general objectives of EBCE programming:

A. to provide a bridge between career-oriented and academic-oriented educational activities;

B. to provide students with the personal attitudes and skills required to make effective career decisions;

C. to expand and focus upon student career aspirations;

D. to enhance the employability of each student;

E. to increase student motivation to learn and achieve;

F. to increase cooperation between the educational and the manpower institutions;

G. to broaden occupational opportunities for youth; and

H. to provide expanded learning opportunities to students who are academically, socioeconomically, or otherwise handicapped.

Project Implementation

The AEL-developed EBCE Model, as implemented in the present Project, called for an initial week of orientation, during which students would be assisted in an introduction to their career and academic programs. Specific student career interests would be related to potential site placements, and a tentative listing of desirable placements would be compiled. Students' requirements, basic skills, and interests would be previewed, in order to draw up individualized learning programs. Each student would have a personalized set of objectives and related projects. After individual activity-sheets would be worked out, the students would begin their placements, in accordance with indicated career interests. Students might spend anywhere from two to fourteen weeks at one experience site; on a weekly basis, they would spend four days at the job site and one day at the EBCE Learning Center, consulting with the Learning Coordinator in order to update their academic and career programs.

CHAPTER II

EVALUATION FORMAT

Purpose of the Evaluation

The purpose of the third-party evaluation is to determine the EBCE Project's success in meeting the stated goals and objectives outlined in the RESA Maryland proposal. The evaluation report is addressed primarily to the administrators and coordinators responsible for its implementation at the local level. The implications of the evaluation for the larger, national Career Education movement are indirectly in so far considered as the evaluation findings are analyzed within the framework of broader issues at a national level.

Scope of the Evaluation

In order to focus on the varied dimensions of this Project, the evaluators have applied a Context, Input, Process, and Product (CIPP) evaluation model based on that developed by Daniel Stufflebeam.* This approach allows the evaluator to consider the interrelationship of procedural and intended elements with product and actual results. It stresses a systematic, cyclical approach in assessing a given project. Moreover, it provides a convenient framework for assimilating multiple sources of data and relating these data to decision-making about major elements of a project.

The following paradigm** depicts the four elements of the CIPP model:

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*Daniel L. Stufflebeam, "Educational Evaluation and Decision-Making," in Blaine R. Worthen and James R. Sanders, Educational Evaluation: Theory and Practice (Worthington, Ohio: Charles A. Jones, 1973), pp. 128-142.

**Based on Stufflebeam, p. 135.

	INTENDED	ACTUAL
ENDS	(planning) CONTEXT	(recycling) PRODUCT
MEANS	(structuring) INPUT	(implementing) PROCESS

Figure 2

In relation to administrative decision-making, "context evaluation serves planning decisions to determine objectives; input evaluation serves structuring decisions to determine project designs; process evaluation serves implementing decisions to control project operations; and product evaluation serves recycling decisions to judge and react to project attainments."*

More precisely, context evaluation aims at defining the operating context, identifying and assessing needs and opportunities, and diagnosing problems related to the needs and opportunities. Input evaluation analyzes system capabilities, input strategies, and implementation designs. Process evaluation identifies strengths and weaknesses in the procedural design and its implementation. Also, it maintains records about procedural events and activities. Product evaluation, the last phase in the cycle, produces outcome information and relates this information to objectives and to context, input, and process information.*

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*Stufflebeam, p. 136.

Based on this model, the evaluators have attempted a four-dimensional focus on the general EBCE program objectives by considering the decision-making implications for each of the objectives with respect to their context, input, process, and product dimensions. Thus, each objective (or Project aim) is analyzed from the standpoint of its origin, its design, its implementation, and its effects.

Specific Evaluation Design

The design for the evaluation consists of five parts: (1) establishing a set of structural guidelines categorizing primary parameters of the EBCE project; (2) identifying relevant data and information and determining the most appropriate sources; (3) selecting instruments for data gathering; (4) analyzing the data by means of statistical and non-statistical treatment; (5) and relating the results of the analysis to the structural guidelines.

The structural guidelines refer to several Project areas: (a) the general features of the project: community support, academic quality, programmatic effects, and (b) the organizational implementation of the Project. Under community support, the evaluators include such groups as employers, parents, and community advisory council members. Academic quality indicates the maintenance and/or enhancement of skills as determined by academic grades, performance criteria, and perceptions of key participants.

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*Stufflebeam, p. 139.

Under programmatic effects, the evaluators deal with fundamental outcomes related to the career education advancement of students. These outcomes include students' career attitudes, communication skills, critical reasoning abilities, employability, and occupational aspirations.

The organization domain of the Project refers to the administration and technical implementation as personified by the local Board of Education, RESA Maryland, Project director, Project staff, and other subsystems.

Program Objectives

The eight EBCE Program objectives are characteristically general and represent convenient parameters for analyzing the structural guidelines. Thus, each of the guidelines can be further defined in terms of corresponding objectives. The evaluation of the guidelines includes specific attention to these proposed objectives. However, other significant Project aims and consequences, generated by the local implementation and the unique features associated with its status as a first-year endeavor, are given appropriate consideration as logical corollaries emanating from first-year aims and activities.

Furthermore, the evaluators should point out that conclusions based exclusively on the stated objectives would not yield a sufficient assessment of the overall project. Two factors prompt this conviction: (1) the general scope of the objectives resists precise quantitative measurement; and (2) by themselves these objectives do not depict all of the important elements of the Project.

Data Sources

With assistance from the local Project Staff, the evaluators identified both quantitative and qualitative data essential to conducting their assessment. These data are listed below with accompanying sources of data and instruments for data gathering.

DATA	SOURCE	INSTRUMENT
Student career gains	Students	Career Maturity Inventory Interview Student Questionnaire
	EBCE Staff	Interview
	Parents	Questionnaire
	Employers	Questionnaire
	Principals	Interview
	Counselors	Interview
Student academic-cognitive characteristics	Students	Watson-Glaser (critical thinking) Student records Interview Questionnaire
	EBCE Staff	Interview
	Parents	Questionnaire
	Principals	Interview
	Counselors	Interview
Community support	Community Advisory Council	Records
	Employers	Questionnaire
	Parents	Questionnaire
	EBCE Staff	Interview
	EBCE Administration	Interview

DATA	SOURCE	INSTRUMENT
Administration	RESA	Interview Records
	BOE	Interview
	EBCE Project Director	Interview Records
	EBCE Project Staff	Interview
	Principals	Interview
	Counselors	Interview
	Steering Committee	Records On-site Evaluation
Other programmatic effects		
a) Student employability	Students	Student Interview Questionnaire
	EBCE Staff	Student follow-up
	Employers	Questionnaire
	Parents	Questionnaire
b) Selection of students	EBCE Administration	Interview Records
	EBCE Staff	Interview Records
	Students	Interview Questionnaire
	Principals	Interview
	Counselors	Interview
	Parents	Questionnaire
Project development and replication	Administration	Interview
	EBCE Staff	Interview
	Principals	Interview
	Employers	Interview

SOURCE	INSTRUMENT
Counselors	Interview
Parents	Interview Questionnaire
Students	Interview Questionnaire

Student Outcomes

Quantitative data concerning students' career maturity and academic characteristics were obtained from pre-post test results. After the eligibility list of students interested in participating in EBCE was narrowed to 140 students, the Project director randomized the eligible students, so that six (6) students (experimental) were selected for each participating high school. Thus, four (4) twelfth-grade students were identified for each school, with two (2) EBCE alternates for replacement contingencies. Likewise, four (4) control students were randomly selected from the eligibility list of 140 for each school.* All experimental and control students were selected randomly through the CAR00L Computer program at Allegany County Vocational-Technical Center Computer Lab.

After replacement of some students who decided not to participate, the following EBCE students took part in the initial Orientation and remained in the program:

5	Allegany
3	Beall
5	Bishop Walsh
3	Bruce
4	Flintstone
4	Fort Hill
24	

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*In point of fact, six control students were randomly selected: four first-choices and two alternates, so as to have an equal number (6) of control and experimental students for each school.

By school, the following control students were tested on a pre- and post-basis:

5	Allegany
3	Beall
6	Bishop Walsh
4	Bruce
3	Flintstone
2	Fort Hill
23	

Testing Procedure

The experimental and control groups were administered the CMI and the Critical Thinking Appraisal on a pre-post basis. The pre-tests were given to both groups on January 26, 1977, and the post-tests on May 23, 1977. Because of circumstances beyond the control of the evaluators, testing conditions were not identical for pre- and post- sessions. Different rooms were used for the tests, and beginning and ending times varied. However, generally, the CMI and the Critial Thinking Appraisal were administered in a similar manner with a maximum effort to maintain as much consistency as possible, given unanticipated constraints.

The testing format was as follows. The CMI was administered during the morning for both pre- and post-tests, with approximately twenty minutes apportioned for the Attitude Scale, and one hundred minutes for the Competence Test. Students were given fifty minutes during the afternoon of both pre- and post-sessions to complete forms Ym and Zm of the Critical Thinking Appraisal. During these sessions students also completed a Student Data Sheet (pre-session); and a questionnaire and a personal interview were given (post-session).

The CMI was utilized in order to gauge both attitudinal and career-competence gains for participating and non-participating students. At the present time this instrument is regarded as the most appropriate and discriminating vehicle for measuring impact of an EBCE program on students.

The evaluators searched all available literature, especially evaluation studies completed under the aegis of the USOE, and determined that the most consistent instrument employed in the nation for quantifiably measuring student career progress was the CMI. In passing, it is interesting to note that in the absence of quantifiable measures, many career education evaluators have resorted to subjective instruments, such as student questionnaires, self-perception inventories, and the like. For purposes of this evaluation ERFS determined that subjective instruments should be combined with objective or quantifiable measures so as to obtain a more empirical and comprehensive focus.

Correspondingly, the Watson-Glaser Critical Thinking Appraisal was selected to assess students' cognitive dispositions, particularly as they might be affected by participation in Career Education. Given the constraints of a half-year or sixteen-week program for which conventional achievement tests are not designed, the evaluators chose, quite experimentally, one seemingly appropriate "cognitive" index in order to probe, in some way, the so-called academic/cognitive domain.

Nature of the Tests

The CMI contains two sections. The first section, the Attitude Scale, contains fifty items. This Scale, according to the CMI Administration and Use Manual, is a valid measure of career-choice attitudes. It is a means of charting students' career maturation and assessing the quality of their career decision-making. Originally designed as an instrument for screening career immaturity and assessing guidance needs, its use on a pre-post basis appears to be both tentative and unsubstantiated. Yet, as discussed above, no superior substitutes could be located and its application as a measurement of attitudinal gains over time seems reasonable.

The second section, the Competence Test, contains five parts with twenty items in each. These parts are classified as follows: Knowing Yourself (Self-Appraisal), Knowing About Jobs (Occupational Information), Choosing a Job (Goal Selection), Looking Ahead (Planning), What Should They Do? (Problem Solving). The Competence Test is considered, by its authors, to complement the Attitude Scale in studying career development; assessing curricular and guidance needs; evaluating career education; and testing in career counseling. "Each of these potential uses of the Competence Test is discussed with the understanding that only minimal supportive data have been collected thus far" (page 35). This section of the CMI, despite the lack of sufficient data to ascertain its validity, was selected to determine the degree of students' career competence orientation to the world of work, and the acquisition of usable career skills.

By means of a t-test for statistical significance, the evaluators analyzed the pre- to post-scores for the Attitude Scale and for each separate part of the Competence Test. Separate analysis for each part of the Competence Test is strongly recommended in the CMI Administration and Use Manual. "There are no norms for total score; each part is to be converted separately. This is because the parts are designed to measure different competencies .... Thus, a total score for the five parts of the Competence Test would tend to obscure specific immature career behaviors which the various parts are designed to reveal" (page 28).

A percentile conversion of the Attitude Scale for raw scores was made with combined grade 12 norms and with grade 12 in six selected states. Similarly, Competence Test raw scores were converted to twelfth-grade national percentiles for each part.

The Watson-Glaser Critical Thinking Appraisal, selected as a partial and expedient index to cognitive achievement, is a well-recognized device for measuring students' rational abilities. Designed as a power rather than a speed test, the Watson-Glaser contains five parts: Inference, Recognition of Assumptions, Deduction, Interpretations, and Evaluation of Arguments. For the pre-test, Form Ym was selected, and Form Zm for the post-test. Percentile ranks and stanines have been published for grades 9 through 12 and for Otis Gamma IQ's. Its use in the context of this EBCE Program is as a "research tool to determine the relationship between critical thinking abilities and other abilities or traits."

These abilities or traits were established as career education characteristics. Thus student results on the two sections of the CMI could be correlated with their critical thinking scores. Also, the Critical Thinking Appraisal could be analyzed on a pre-post basis, independent of CMI results. Statistical t-tests of significance and translation of raw scores to percentile ranks were performed by the evaluators.

Comparability of Testing Groups

The control-experimental format initiated by means of random sampling of twenty-four experimental students with an equal or near-equal number of control counterparts was designed to measure the general impact of the Project in a comparative and baseline manner. Student pre-test scores for both groups on the CMI and Critical Thinking Appraisal were analyzed through t-test and F-test of significance to probe homogeneity. Also, likenesses as represented by the Student Data Sheet were given equal import. As results in the next chapter demonstrate, the two groups were found to be homogeneous in all five parts of the CMI Competence Test. However, they were heterogeneous at a statistically significant level in the CMI Attitude

Test (.002) and in the Critical Thinking Appraisal (.016). In terms of demographic characteristics, the students appeared to be generally similar.

After consideration of the pre-data comparability results, the evaluation team met with the EBCE Project Administrators to present and discuss these results and determine alternative actions. Consequently it was agreed upon that where the groups were comparable, pre- and post-test results would be used. Furthermore, emphasis would now be directed towards comparing the experimental group on a pre- and post-basis supplemented by consideration of these results with national and local norms and percentile equivalents. The evaluation team, therefore, made maximum utilization of as many data sources as possible in order to assess the Project in a comprehensive fasion.

The control and experimental students, although selected stratifiably by school , were treated for statistical purposes as sample groups, i.e., 24 experimental and 23 control.*

Interviews and Questionnaires

For the questionnaires that were administered to participating students, parents, employers, EBCE Staff and Administration, principals, and counselors, a frequency distribution of Likert interval responses was performed. Interviews with most of the above groups were analyzed by means of summary-response techniques, identifying consensus responses and significant minority opinions. The number of people included in each group by questionnaire and interview was as follows:

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*The unusually small N of students (4 experimental and 4 control) does not encourage treating each school on a separate sample.

Questionnaire		Interview	
Group	N	Group	N
EBCE Students	24	EBCE Students	24
Parents	15	EBCE Staff	5
Employers	44*	EBCE Administration	3
		Principals	6
		Counselors	6

Documentary Search and Analysis of Pertinent Records

The following documents and records related to the Project were analyzed as they might yield significant supplementary information about its overall progress and development:

Site Placement Opportunities
Student Sites Selected
Community Advisory Council Minutes
Steering Committee Minutes
Quarterly Reports
Learning Coordinator Records
Budget Information
Initial Student Follow-Up
Calendar of Events
Project Publicity
Project Dissemination Records

Student Data Sheet

Both control and experimental groups completed a demographic data sheet, which contained 11 broad background items with several sub-items included. A copy of this Sheet is included in the Appendix section of this report. Results for both groups were related to their CMI and Critical Thinking outcomes in order to ascertain the homogeneity of the control versus the experimental group and for possible correlation between demographic characteristics and progress in the Program.

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*Represents a return rate of 66%; 67 questionnaires were sent out and 44 were returned as of July 1, 1977.

Relating Results of Analysis to Structural Guidelines

The results of the data analyses are referenced with the structural guidelines by means of Target Questions. These questions translate the Project Objectives into quantifiable statements and probe the central features of each Structural Guideline.

The format for the remainder of this report follows the logical sequence of presenting conclusions about the effectiveness of the Project (Chapter 111), and providing formative recommendations to the local Project Administrators for the improvement and continuation of the EBCE Project in Allegany County, Maryland (Chapter 1V).

Model for the Evaluation

In capsule form, the following model depicts the major aspects of the third-party evaluation, and it combines all of the previous elements discussed in this section in a brief, synoptical format.

Structural Guidelines	Target Questions	Instrument	Design	Effectiveness Criteria	Primary Data Source
General Features of the Project A. Community Support	1.To what degree did the community support the EBCE Project?	1.Interviews 2.Questionnaires 3.Extant Project Records	1.Summary Analysis of Interviews. 2.Frequency of Response of Questionnaire items 3.Summary analysis of Project Records.	1.Consensus of interviewees. 2.$\bar{X}$ Likert Response above 3.5. 3.Corroborating, subjective evidence in Project Records.	1.EBCE staff 2.(a) Employers (b) Parents 3.(a) Community Advisory Council Records (b) Student Site Placements
	2.Did the Community consider the Project to be worthwhile and effective?	1.Questionnaire	1.Frequency of Response of Questionnaire items.	1.$\bar{X}$ Likert Response above 3.5.	1.(a) Employers/Resource Persons (b) Parents
B. Academic Quality	1.Did the EBCE students maintain academic skills?	1.Available student records. 2.Interviews 3.Questionnaires	1.Student G.P.A. and academic progress analysis. 2.Summary analysis of Interviews. 3.Frequency of Response of Questionnaire items.	1.(a) Minimum maintainence of G.P.A. and graduation from high school. (b) Maximum improvement in G.P.A. 2.Consensus of Interviewees. 3.$\bar{X}$ Likert-Response above 3.5.	1.Student Academic records pre-project and en-project. 2.(a) Learning Coordinators (b) students 3.(a) parents (b) students (c) employers

Structural Guidelines	Target Questions	Instrument	Design	Effectiveness Criteria	Primary Data Source
B. Academic Quality Continued	2. Did the EBCE students maintain cognitive skills?	Watson-Glaser Critical Thinking Appraisal.	1. Pre-Post Gains. 2. Norm group comparison of $\bar{X}$ post test results and percentile conversions.	1. Students should show post-test gains. 2. Students should perform at least as well as the national norm group on post-test.	24 EBCE Students
	3. Did the students increase their motivation to learn and achieve through their participation in EBCE?	Questionnaires.	1. Frequency of Response of Questionnaire items.	1. $\bar{X}$ Likert-Response above 3.5.	1. (a) students (b) parents
	4. Were expanded learning opportunities provided for students who were academically socioeconomically, or otherwise handicapped?	1. Available project records. 2. Interviews	1. Summary Analysis of Records. 2. Summary Analysis of Interviews.	1. Corroborating evidence in Project records. 2. Consensus of Interviewees.	1. LC records and Project Director records. 2. LC's

Structural Guidelines	Target Questions	Instrument	Design	Effectiveness Criteria	Primary Data Source
C. Programmatic Effects	1.Did the EBCE Project provide the students with the personal skills required to make effective career decisions?	1.CMI Competence Test, Parts 1-5. 2.Questionnaires.	1.(a) Experimental/control Pre-Post Comparisons. (b) Norm group comparisons of $\bar{X}$ test results and percentile conversions. 2.Frequency of Response on Questionnaire items.	1.(a) Experimental (EBCE) student should surpass control group on at least three of the five parts of the CMI Competency Test. (b) EBCE students should perform at least as well as the national norm group on post-test in all five parts of CMI Competence. 2.$\bar{X}$ Likert-Response above 3.5.	1.(a) 24 EBCE students and 23 control counterparts. (b) 24 EBCE students. 2.(a) Employers (b) Students (c) Parents
	2.Did the Project provide students with the Personal attitudes required to make effective career decisions?	1.CMI Attitude Scale 2.Questionnaires.	1.(a) Pre-Post test comparisons of Experimental and control groups. (b) EBCE post-test gains vis-a vis national 2.Frequency of Response on Questionnaire items.	1.(a) Experimental students should surpass control group on Post-Test. (b) EBCE students should be above national norm on post-test. 2.$\bar{X}$ Likert Response	1.(a) 24 EBCE students and 23 control students (b) 24 EBCE students. 2.(a) Employers (b) Students (c) Parents

Structural Guidelines	Target Questions	Instrument	Design	Effectiveness Criteria	Primary Data Source
C. Programmatic Effects Continued	3. Did the Project enhance the employability of each student?	1. Questionnaires. 2. Initial Follow-up of EBCE graduates.	1. Frequency of Response on Questionnaire items. 2. Analyze Follow-Up data for number of students finding employment.	1. $\overline{X}$ Likert Response above 3.5. 2. At least 50% of those students not planning to attend post-secondary institutions will find employment.	1. (a) Students (b) Parents 2. 24 EBCE students
	4. Did the Project expand student career choices and aspirations?	1. Questionnaires.	1. Frequency of Response of Questionnaire items.	1. $\overline{X}$ Likert Response above 3.5.	1. (a) Parents (b) Students (c) Employees
Organizational Implementation of the Project.					
A. Decision-Making	1. Were major managerial decisions made at an appropriate hierarchical level and in a manner consistent with stated Project aims?	1. Interviews 2. Project Records	1. Summary Analysis of Responses from Interviewees. 2. Summary Analysis	1. (a) Appropriate level of decision-making. (b) decisions consistent with project objectives and aims. 2. Same as (1) above.	1. (a) RESA (b) BOE (c) EBCE Project Director 2. Steering Committee Minutes.

Structural Guidelines	Target Questions	Instrument	Design	Effectiveness Criteria	Primary Data Source
B. Project Dissemination and Public Relations.	1.At the local level were the primary audiences adequality informed about the Project?	1.Questionnaires. 2.Interviews	1.Frequency of Response of Questionnaire items. 2.Summary analysis of Interviewees' responses.	1.$\bar{X}$ Likert Response above 3.5. 2.Consensus of response.	1.(a) Principals (b) Counselors (c) RESA (d) BOE (e) Project Director
	2.At the state, regional, and national level were the primary audiences adequately informed about the Project?	1.Project records	1.Summary Analysis.	1.Information provided clearly and reqularly to intended audiences.	1.(a) NIE (b) U.S.O.E. (c) Maryland State Department of Education (d) National groups
C. Project development and replication.	1.Were efforts made to extend EBCE to other school systems in the State of Maryland?	1.Interviews	1.Summary Analysis.	1.Consensus of Responses	1.(a) RESA (b) BOE (c) Project Director
	2.Were efforts made to plan for the future direction of the Project as an integral component of the local school system?	1.Interviews	1.Summary Analysis.	1.Consensus of responses	1.(a) Principals (b) RESA (c) BOE (d) Project Director

CHAPTER 111

PROJECT EFFECTIVENESS

Introduction

By means of target questions that analyze the Structural Guidelines, the Evaluators assessed the central strengths and weaknesses of the EBCE Project. Specific answers to each target question indicate specific conclusions by the Evaluator. At the end of this section, general conclusions are presented in a summary fashion.

Guidelines and Questions

Within the category of General Project Features, two structural guidelines were established for extensive evaluation. Specific conclusions for the target questions related to the Guidelines are supported by means of accompanying data tables and data summaries. Complete presentations of all data collected are contained in the Appendix Section.

I. General Features of the Project

A. Community Support

Question 1: To what degree did the Community support the EBCE Project?

On the basis of scanning extant records of community support as registered by the Community Advisory Council, Employer Sites, and EBCE staff perceptions, it is apparent that the EBCE Project produced substantial support from the community. Most impressive are the number and variety of sites made available to the participating students. All but one career cluster (Marine Science) was represented, and efforts appear to have been made to obtain as many appropriate work experiences as possible, given the limitations of time and space.

49 Sites Developed via Employer Cooperation in 15 Career cluster

Career Cluster	# of Sites Developed*
Agri-Business & Natural Resources	1
Business & Office	6
Communication & Media	8
Consumer & Homemaker	3
Construction	4
Environment	1
Fine Arts & Humanities	2
Health Occupations	6
Hospitality & Recreation	5
Manufacturing	3
Marine Science	0
Market & Distribution	7
Personal Service	1
Public Service	6
Transportation	4

The establishment of the Community Advisory Council (CAC) is a second index to the acceptable level of Community support for EBCE. Composed of 35 representatives of business, industry, and education, the CAC met three times during the year. General rules of order were developed and Co-

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*One site can satisfy more than one career cluster.

Chairpersons were elected to coordinate the Council. As the minutes from the three sessions indicate, the CAC provided a useful forum for orienting community leaders about the nature and purpose of EBCE.

More extensive support in the form of direct involvement in planning and developing EBCE by the CAC was not tangibly in evidence. However, good will and enthusiasm for the endeavor were developed.

Question 2: From the standpoint of Employers and Resource Persons, did the Community consider the Project to be worthwhile and effective?

Based on a 1-5 Likert-scale, the Employers and Resource Persons rated the project as highly effective (4.27). Also, the majority of employees at the sites reacted very favorably to the EBCE students (4.26). Top level management exhibited an equally favorable attitude toward the Program (4.36). Thirty-four of the 44 responding employers stated that their company would continue to participate in EBCE in subsequent years. No employer stated that he would discontinue the Program (8 answered "Don't Know" and 2 gave "No Response").

In their support of EBCE, the Employers gave the Program credit for the following benefits to their company:

EBCE improved the quality of work performed by regular employees.

EBCE had a positive influence on the amount of work performed by regular employees.

EBCE had a slightly positive impact on Company training practices.

Asked to cite other specific strengths of the Program prompting their support for it, the employers stated that:

It provides management a resource for placement at a later date.

It gives students the opportunity to plan their future.

Students may actively participate in a job activity.

The employers also volunteered several insightful comments about the shortcomings of the Program, which if left unattended might abate their support for it:

(1) Lack of student orientation before starting the field placement.

(2) Cost effectiveness per student was disproportionate. (In some cases, a job site had only one student).

(3) Lack of ongoing site observations by EBCE staff.

(4) Follow-up information on students was lacking.

(5) Some students were not placed when they were qualified.

(6) Some students were not placed where they could function.

(7) Too short a time at work site.

B. Academic Quality

Question 1: Did the students maintain academic skills?

Based on available information, the Evaluators determined that students did maintain, and in some cases ameliorate, their academic skills. First of all, all EBCE students were successfully graduated from their respective high schools. In one case, a student had been deemed unlikely to graduate before she began EBCE. In the opinion of the Principal and others, if she had not received alternative instruction and experiences such as those provided by EBCE, she probably would have "dropped out" of school.

The Evaluator sought other quantitative measures to assess this objective. As of this date (September 22, 1977), information about students' G.P.A. were unavailable. Comparisons of the Grade Point Averages of the EBCE students and their control counterparts will be completed, and a brief analysis will be published as a supplement to this evaluation report.

Given the paucity of quantitative data concerning academic achievement,* the Evaluator analyzed some of the major procedural characteristics of the Project and concluded that the academic dimension appears to be highly creditable. Based on perceptions of county school administrators, the EBCE curriculum was equal in all important respects to the Allegany County curriculum for 12th graders. Furthermore, the Learning Coordinators were extremely competent teachers. They demonstrated mastery of the basic disciplines and were unusually versatile in providing tutorial instruction in a wide range of subject matter.

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*The reader is reminded that because of the time frame of the Project (16 weeks), it was not possible to administer an achievement instrument on a pre/post basis. See Evaluation Design.

Question 2: Did the students maintain cognitive skills in the Critical Thinking Appraisal?

Analysis of post-test results on the Watson-Glaser Critical Thinking Appraisal indicates that the EBCE students not only maintained, but improved their cognitive skills. The participating students gained 6% on the national norm and improved one stanine from pre- to post-test. Moreover, the degree of their gain on the post-test approaches statistical significance. Experimental vs. control group comparisons are not appropriate because of non-comparability of the two groups on the pre-test.

WATSON-GLASER CRITICAL THINKING APPRAISAL

1976-77 SCHOOL YEAR

EXPERIENCED-BASED CAREER EDUCATION

	N	Pre-test $\bar{X}$	Post-test $\bar{X}$
Experimental Group	24	60.54	57.04
Control Group	23	55.22	53.09
		.0109	.06025

	N	Pre-test $\bar{X}$	Post-test $\bar{X}$	
Experimental Group	24	60.54	57.04	.0959

	N	Pre-test $\bar{X}$	Post-test $\bar{X}$	
Control Group	23	55.22	53.09	.1727

Question 3: Did the students increase their motivation to learn and achieve through their participation in EBCE?

The findings of the Evaluator are tentative and inconclusive about improvements in EBCE students' motivation. First of all, the students were 12th graders and opportunities to include objective, expert perceptions and measurements about motivational growth were not available. Counselors' reports from the "home school" were available to determine pre- entry motivation level. But post-entry comparisons were impossible to obtain from the "home school" counselors because the students did not return to their home-school after participation in EBCE.

Seeking alternatives to gauge motivational changes, the Evaluator included specific questions about changes in academic motivation on student and parent questionnaires. The 24 students who completed the questionnaire registered a rating of 3.40 (based on 1-5 Likert-scale) in their reaction to the statement: "The program has increased your motivation level toward school." In response to this same statement, the 15 parents gave a higher rating of 4.00.

Both the students and their parents also rated the Program very highly in helping students to develop "a positive attitude toward learning (students 4.61; parents 4.35)."*

Given the subjective and merely perceptual nature of these findings, the Evaluators conclude, given certain qualifications, that some positive changes in EBCE students' academic motivation took place during their participation in the Program.

Question 4: Were expanded learning opportunities provided for students who were academically, socioeconomically, or otherwise handicapped?

Specific records and measures were not maintained by the Project to determine whether this objective was realized. The Learning Coordinators appear to have taken individual difference of students into consideration in developing an academic program for them in EBCE. Whether these considerations represented expanded learning opportunities is a very hypothetical question. One tentative conclusion is to propose that the tutorial method of one LC teaching one student is an expanded learning opportunity *per se*.

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*Perhaps the adult environment encountered by the students at the career sites produced a positive and more mature attitude toward education.

C. Programmatic Effects

Question 1: Did the EBCE Project provide the students with the personal SKILLS required to make effective career decisions?

Based on students scores on the five parts of the CMI Competence Test, it is possible to derive specific conclusions about the effect of this Program on their personal career skills. Generally, the EBCE students (as opposed to their Control counterparts) learned more about themselves, engaged in more mature job decision-making, and were more apt to plan better for their future.

More specifically, EBCE students are most competent in Choosing a Job (Goal Selection) and Knowing Themselves (Self-Appraisal). Also, they exhibit positive and superior gains in Looking Ahead (Planning), compared to their Control group peers. See Appendix for a complete presentation of students' results on CMI.

In relation to national means for the five parts of the CMI Competence, the EBCE students are above the national average in Knowing Yourself, Choosing a Job, and Looking Ahead. They are less successful than the Control counterparts in Knowing About Jobs and in Problem Solving; however, their post-tests scores in these two parts are still well above the national mean.

Although statistical significance does not occur in distinguishing post-test results of experimental and control students, EBCE students demonstrate positive gains in all five parts of the CMI Competence Test. These gains are higher than the gains of the Control group. Furthermore, in three of five parts, the Experimental Group ranks higher by percentile score than does the

Control. In the other two parts, both groups have identical percentile conversion scores.

The reactions of employees and parents also testify to the high degree of accomplishment of this objective. The employers stated that as a result of EBCE the students obtained the most valuable benefits in the following areas:

	Cumulative* Addition
(1) Work with others	(9.19)
(2) Aware of more career opportunities	(9.16)
(3) Assume responsibility for themselves	(9.07)
(4) Communicate with others in a mature way	(9.05)

According to the employers, EBCE students obtained the least benefits in such important areas as:

	Discrepancy between Importance and Actual Effectiveness **
(1) Think through and solve problems	(-.84)
(2) Make decisions and follow through	(-.77)
(3) Evaluate their work	(-.71)
(4) Perform specific occupational skills	(-.54)

Interestingly, the employers assigned considerable importance to being punctual and organizing one's time. EBCE students received "effective" marks (4.07) in this area.

In conjunction with factors prompting the development of positive career skills, the employers identified the most typical experiences provided at their sites.

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*Computed by adding two Likert mean Scores; a score of 10 is the maximum.

**Computed by subtracting one Likert mean from another Likert mean; a score of zero would represent the least descrepancy.

Student experiences at the sites took the form most frequently of actively performing site activities and talking with other site personnel. Students also had frequent opportunity for observing site activities, talking with the employer. Students only occasionally conducted research from site activities or carried out individual study.

Most often, the employers engaged in discussing the activities at their site, supervising students to perform a specific job-related task, helping to plan student activities, and evaluating individual students' assignments.

Based on their ranking of a series of learning items (identical to the list administered by the employers), the parents observed that the following most important outcomes were successfully accomplished:

		Cumulative* Addition
(1)	Aware of more career opportunities	(9.46)
(2)	Work with others	(9.46)
(3)	Assume responsibility for themselves	(9.20)
(4)	Communicate with others in a more mature way	(9.19)
(5)	Make decisions and follow-through	(9.06)
(6)	Be punctual and organize their time	(9.06)

It should be also pointed out that the ratings of the employers and parents to all items concerning career skills were above 4 on a 5-point scale, indicating considerable endorsement of the Program in fulfilling this objective. Lastly, the students' self-perceptions of their own improvements in career skills buttress the positive reactions of the other two groups.

Question 2: Did the Project provide students with the personal ATTITUDES required to make effective career decisions?

The first index to EBCE's effect on students' career attitudes is the CMI Attitude Scale.

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*Computed by adding 2 Likert Mean Scores; score of 10 is highest.

The post-test results indicate that the EBCE students exhibit slightly more mature career attitudes after participation in this program.* However, their gains are not statistically significant. While the EBCE students have a higher group post-test attitudinal mean than do the Control students, the Control students gains are statistically significant. What do we conclude from this?

Given the pre-test differences between the experimental and control groups, which suggest that the two groups are not comparable, the post-test results cannot be analyzed according to statistical significance. It is possible only to compare the experimental group by itself, in which case they appear to have improved their career attitudes, albeit marginally. Less scientifically, no overall negative results have occurred.

Further analysis of the post-test results reveals that the EBCE students gained 8% from pre- to post-test, but are still 7% below the national norm. Moreover, their post-test mean is 1.34 below the national mean.

These are mixed results and warrant the most cautious and tentative of conclusions.

Supplementary data based on parent, employer, and student perceptions encourage a more positive appraisal of this objective. The following statements about career attitudes appeared in both the Parent and Employer questionnaires. The respondents ratings of each item** were as follows:

	Employer	Parents
(1) Students gained a more positive attitude toward work.	9.08	9.08
(2) Students gained a more positive attitude toward self.	9.07	9.15

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*See Appendix section for complete presentation of CMI Attitude Scale results.

**Cumulative addition of 2 Likert Mean Scores, score of 10 is highest.

Student perceptions about their personal and career attitudes tend to suggest a positive accomplishment for EBCE. The students (using a 1-5 Likert scale, with 1 measuring "definitely yes" and 5 "definitely No") affirmed that their attitudes improved in the following manner.

	Item	Rating
(1)	That their self-perceptions have improved.	1.84
(2)	That their attitudes towards work have improved.	2.13
(3)	That their attitudes towards themselves have been enhanced.	2.13

The Evaluators tested for two of these same dispositions in a slightly different form. In a separate section of this questionnaire, the EBCE students were asked to rate how effective the Program was in improving two specific attitudes. The Likert mean responses (5 highest and 1 lowest) were as follows:

	Item	Rating
(1)	Have a positive attitude toward work.	4.53
(2)	Have a positive attitude toward self.	4.48

Thus, the results from subjective data differ with those from the CMI and no clear-cut conclusions can be deducted about changes in EBCE students' career attitudes.

Question 3: Did the Project enhance the employability of each student?

The measures used to determine the Project's contributions to students' employability were responses from parents and students to specific items on questionnaires. Available perception data suggests that the employability of EBCE students as a group was enhanced. The perceptions do not give rise to a definitive conclusion, but merely suggest that most of the students are probably more employable now than they were before. How much more employable?--we do not know.

Question 4: Did the Project expand student career choices and aspirations?

The EBCE Project had a very positive effect on enhancing students' career choices and aspirations. All key respondents (see Tables following) rated the Project as very effective in both ameliorating career aspirations and expanding career outlooks. These subjective results suggest that the students became more mature in their career ambitions.

RESPONDENTS' PERCEPTIONS OF ENHANCEMENT IN CAREER CHOICES AND ASPIRATIONS

Item	Mean Rating	
	Parent	Student
The students' career aspirations were enhanced as a direct result of this program.	4.13	4.34
The student now has a better understanding of the world of work, i.e., job availability and necessary requirements.	4.40	4.30
The student was aided in choosing a career.	4.00	4.30

Item	Mean Rating*		
	Employer	Parent	Student
The student is aware of more career opportunities.	4.50	4.66	4.61

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*Likert 1-5 range, 1 low/5 high.

Responses on 1-5 Likert-Scale (1 low/5 high) to Employability Questions.

Item	Student	Parent
By participating in the program you acquired a saleable skill necessary for employment after graduation.	4.21	3.80

The parents were also asked to react to the statement on a 1-5 Likert (1 strongly disagree/5 strongly agree):

Item	Student	Parent
Your child will have a greater chance of community employment as a result of his participation in EBCE.	4.05	3.66

Also, the project staff developed an Initial Follow-Up on EBCE Graduates to record their subsequent career and employment patterns. The results as of July 28, 1977 indicate that of the 11 (eleven) students not planning to attend a post-secondary institution on a full-time basis, 8 (eight) have been employed -- a substantial and impressive percentage, 72%. Comparisons with control students is forthcoming.

"Employability," especially its "enhancement," is a potential variable and difficult to confirm or deny even when behavior or so-called instances of it might be found. Even if a student has been employed, we have no way of being certain that he was employable all along. Further, employment, as we are already to aware from the depressing monthly statistics by the Department of Labor, is often a temporary condition. Thus, conclusions about this attribute for an individual, let alone a group, are difficult to derive and should be regarded as provisional, at best.

ORGANIZATIONAL IMPLEMENTATION OF THE PROJECT

The evaluators selected representative administrative categories concerned with the general management and coordination of the EBCE Project. On the basis of available information from key respondents and insights obtained from observing various functions first-hand, the evaluators analyzed the existing patterns of each administrative category. At the same time, an attempt was made, by means of deriving logical conclusions from the data as well as by introducing the professional judgements of the evaluator, to determine the effectiveness of these same patterns. The categories selected were: (1) decision-making, (2) dissemination and public relations, and (3) development and replication.

A. Decision-Making

This administrative function concerns the generation and implementation of major decisions related to organizational policy, structure, allocation of staff, budgeting, and procedures of implementation. To gauge the effectiveness of this category and, at the same time, to understand the basic managerial climate of the Project, the evaluators focused on two conditions of decision-making: (1) the level at which it took place in the organizational system and (2) the manner of its implementation in that system.

Question 1: Were major managerial decisions made at an appropriate hierarchical level and in a manner consistent with stated Project aims?

The Evaluator concluded that many important decisions were made at the appropriate organizational level, i.e., by RESA. Other decisions however were taken in at various organizational levels and full communication of and agreement with these decisions were not always present. These departures did not seriously jeopardize the integrity or effectiveness of the Program, but if left unattended, they could produce tensions and confusions about purpose and responsibility.

The evaluators determined that most major decisions about the Project were made collectively within the EBCE Steering Committee. This Committee was composed of representatives from RESA, the Project Coordinator, the Research and Evaluation Coordinator; one representative from the Allegany County BOE, the Pupil Personnel Supervisor; and the EBCE Project Director. The typical range of topics discussed at these sessions included: Strategies for student selection, scheduling of student testing, coordination of activities, budgeting particulars, and presentations by the EBCE Director reviewing many of her activities and procedures.

This Committee mechanism was a useful vehicle for reducing confusion about responsibility and authority for decision-making. It also served as a means for the exchange of viewpoints and the coordination of decisions amoung RESA, BOE, and the Project. However, during the course of the Project, its utility diminished and it became an ersatz for efficient and immediate decision-making between the executive agency responsible for the implementation of the Project, RESA, and the Project Director. In the absence of a clear-cut administrative hierarchy, the Project Director assumed primary responsibility for student selection for the second year of operation, logistics, and replication of the Project in its local and regional settings.

Also, in an ironical fashion, the Steering Committee produced as much ambiguity about authority for decision-making as it did clarification of lines of authority. For example, the student selection was not resolved expeditiously. Confusion arose from the fact that RESA has no students and the entire EBCE Project staff is under the direction of the BOE. Thus, several decisions were made by default. The evaluators are not suggesting that the Project Director assumed authority excessively. Rather, the evaluators wish to emphasize that the decision-making process was complex where it could have been simple, ambiguous where it could have been clear, and cumbersome where it could have been efficient. A definite hierarchical arrangement would have promoted more positive consequences. If a representative of RESA assumed primary responsibility for the direction of the Project and delegated authority to the Project Director as appropriate, a smoother, more efficient flow of decision-making would have taken place. In essence, decisions were too frequently made in an informal and ad-hoc manner during the first year of the Project. This is natural in first year of operation. It is also suggested that too many decisions were made at the technical, rather than the executive level of the organization, prompting unnecessary delays in reporting and communication. In some instances decisions were made without the benefit of a managerial perspective.

Question 2: Were decisions made in a manner consistent with stated Project aims?

However, at the executive level, some Project aims were not given proper emphasis because of the informal pattern of decision-making. Others were distorted. Most noticeably, the strategy for expansion of the Project both locally and regionally received moderate attention by the decision-makers. Locally, stress was placed on establishing the Project on firm footing; two additional Allegany County high schools were included for the second year of operation. Expansion in terms of significant increases in LC-student ratio or replication of the Project in the contiguous counties of Garrett and Washington was given less consideration. Serious planning to discover strategies for the eventual integration of the EBCE Project within the existing educational structure of the local school system was initiated near the end of the first year of the Project. This important Project aim has been subordinated, however, to the more pressing need for coping with immediate problems.

At the technical level of implementation, most decisions were congruent with Project aims. The strategies employed in arranging academic programs, placing students at job sites, and coordinating their experiences at those sites, were all consistent with original objectives.

It is not surprising to find that the EBCE Project concentrated primarily on "mechanical" matters during its infancy. This is, after all, a unique, experimental project that requires considerable attention to detail, especially during its developmental stages. It is apparent from the student outcomes in career skills and from the perceptions of parents, employers, and most of the community that the technical implementation of the Project is successful. Less exemplary, however, is the Project's first-year lack of attention to refinement, replication, and re-organization.

B. Public Relations and Project Dissemination

The EBCE Project was intended to disseminate vital information and relate to the public at two levels. (1) At the local or county level, Project information and publicity were to be disseminated by the Project Director to such groups as employers, CAC, parents, home-school principals, teachers, and counselors, BOE personnel, and the public at large. The modes of communication were to be chiefly newspaper, radio, and TV publicity and memos or progress reports. (2) At the state, regional, and national level, Project publicity was the primary responsibility of the Project Coordinator. This RESA representative was to be assisted in this task by the Project Director. Generally the recipients of external publicity would be the U.S.O.E., AEL, Maryland State Department of Education, and national career education associations. Typical media of publicity would be Quarterly and Annual Reports, pamphlets, and news presentations and articles.

Question 1: At the local level were the primary audiences adequately informed about the Project?

Based on responses to the instruments administered by the evaluators, the employers and members of the CAC were adequately informed about the project. The table below of employers' reactions provides representative support for this conclusion.

EMPLOYERS' RESPONSES

1. Did the EBCE staff provide you with the necessary information to help you direct students' activities at your site?

Inadequate	Adequate	Sometimes	NR
1/44 or 7 %	39/44 or 89%	1/44 or 2%	3/44 or 7%

2. Did the EBCE staff:

	Never		Infrequent/Sometimes		Daily/Always	
NR 2	Number	%	Number	%	Number	%
Show you the Student Activity Sheet(s)	2	5	25	57	15	34
Show you the Student Profile	2	5	23	52	17	37
Show you the type of products expected from student	9	20	18	41	14	32
Explain reason for the particular placement	-	-	19	43	23	52
Provide you with feedback on student's progress	8	18	17	37	17	37

By contrast, the home-school principals stated that they were not informed about the progress of their students once these students began the EBCE Program. The principals, according to their responses to the interviews, did not receive feedback from the EBCE Project concerning the students, EBCE activities, their reasons for particular placement in job sit s, the products expected from the student, and the student program profile. In this respect, the principals requested that monthly progress reports be sent to them from the EBCE Project Director about the progress of their students. This information would serve two purposes: it would keep the school administrator, who still has primary responsibility for the student, adequately informed about each student; and even more importantly, it is essential for the principal or the counselor if he is to inform the parents about the progress of their children in EBCE.

In sum, the evaluators concluded that communication between the EBCE Project and the home schools was satisfactory prior to the initiation of students in the Program (September-December, 1976). Principals were informed through the CAC and in special meetings about the goals, objectives, and activities of EBCE. However, during the actual implementation phase they were considerably less informed and a valuable point of contact between the school and the community was under utilized.

Question 2: At the state, regional, and national level were the primary audiences adequately informed about the Project?

The EBCE Project reqularly provided its extra-mural audiences with accurate information about the nature and progress of the Program. This function was coordinated chiefly by the Project Coordinator on behalf of the RESA. Assisted by the Project Director, the Coordinator filed quarterly and reports with the U.S.O.E. through its regional Career Education representative in Philadelphia. He also sent reports and progress documents to the Maryland State Department of Education. The Project was given additional visibility during the on-site visit of the U.S.O.E. Performance Review Team on May 4 and 5, 1977.

The evaluators, who contributed to this external communication requirement by means of an Interim Progress Report and other appraisals at regular intervals, were satisfied that the Project reached a wide audience while fulfilling specific reporting requirements of notification about its progress and any necessary adjustments to the appropriate authorities.

C. Development and Replication

One of the original aims of this Project was to anticipate the future direction of the Program at the local level upon the termination of federal funding. Secondly, the Project administrators were to investigate the possibilities of extending EBCE to the two contiguous county school systems, in Garrett and Washington counties.

Question 1: Were efforts made to extend EBCE to other school systems in the State of Maryland?

Expansion of the Project during the first year beyond Allegany county was not possible because of certain unanticipated events. Garrett County requested that their involvement be postponed until the second year of the Project. At that time, the County would decide whether to adopt EBCE. Washington County, on the other hand, chose not to become involved at this time because of a plethora of alternative educational programs.

Seeking other means to promote the EBCE concept in other locations, the RESA Project Coordinator with the Maryland State Department of Education and NIE and U.S.O.E. successfully initiated a State Networking Project that would promote the Allegany EBCE endeavor statewide. More specific details about this endeavor will be discussed in the forthcoming quarterly report to U.S.O.E. The Networking Project should result in magnifying the EBCE Program and bringing maximum attention to its accomplishments in other school districts in the state of Maryland.

Question 2: Were efforts made to plan for the future direction of the Project as an integral component of the local school system?

At the conclusion of the first year of implementation, the principal EBCE administration "brainstormed" various models for local adoption of EBCE upon the cessation of federal funding. During the interviews, the third-party evaluators addressed this important aim and recorded the recommendations of school principals, BOE representatives, et al. At this time (Fall 1977) several options have been considered and the local school Superintendent has held meetings to discuss this aim; he is seeking a viable method for continuation of EBCE within the structure and context of his school system.

Thus, numerous efforts have been made relative to this aim, and the evaluators, given the initiatives to date, are optimistic that a local solution will be forthcoming in the next few months.

Summary of Conclusions

The following summary conclusions identify the central strengths and weaknesses of the EBCE Project. These conclusions also provide a logical basis for the generation of major recommendations, which are presented in the next section.

Most Successful Dimensions of the EBCE Project

1. Within the Context dimension (see Evaluation Design), the Project's most successful accomplishment was its identification and assessment of needs. Opportunities and activities for the EBCE students were well planned as demonstrated by the generation of positive attitudes toward the Program by the participating students. This can be attributed to the cogent analysis and careful planning undertaken by RESA and its representative, the Project Coordinator.

2. The Input dimension of the Project was measured by means of assessing the level of Community Support and the degree of cooperation of the Principals and school staff. Clearly, the amount of support and participa-

tion from employers and members of the Community Advisory Council was exemplary. In sum, the necessary ingredient of local support was conspicuously evident, and, to a large extent, this can be attributed to the Project Director, the Site Analyst, the Learning Coordinators, and the efforts of the RESA Executive Director, who gave maximum attention during the early phases of the Project to rallying support from all major sectors in the Cumberland area.

3. From the standpoint of the Process dimension, the following procedural aspects were successfully implemented. At the local level, the primary audiences were well informed about the nature and aims of the Project. The Project Director and her staff not only provided pertient information to the participating employers, but they also gave considerable visibility to the Project at its critical beginning phases. Meetings with labor unions and management were held. Brochures and announcements about EBCE were circulated. And the major aims of the endeavor were given wide coverage and generous exposure.

Through the parallel efforts of the Project Coordinator, the Project achieved similar success in its extra-local publicity.

With respect to technical implementation -- more specifically, the educational processes -- the Project Director and her staff were most visibly successful in locating a large number of suitable sites, providing satisfactory alternative learning experiences through the so-called tutorials between the LC and the student, and placing the students in a wide variety of job sites.

4. In the Product cycle, the Project registered impressive gains in the Critical Thinking Appraisal and the Career Maturity Inventory Competence Test. In the latter, the EBCE students improved their skills for making effective career decisions. With no loss to their cognitive

(thinking) skills, these students obtained valuable training in career planning and decision-making, as evidenced by their performance on the CMI.

These results would seem to suggest that the career program is implemented by the Project staff and effected by the employers and resource persons achieved its original objective in an excellent manner. Success in this dimension also confirms the conclusion that many of the elements in the Context dimension were well conceived: most notably planning, needs assessment, and provision for career opportunities.

Least Successful Dimensions of the EBCE Project

1. In the Context dimension, the least successful aspect of the Project was its inability to establish precise and measurable objectives. The eight aims established for the Project, as articulated in the Proposal, provide a broad set of ambitious goals and are appropriate at that conceptual level. With the benefit of hindsight, the evaluators concluded that these objectives are vague parameters upon which to direct activities and assess performance. For this reason, hypothetical evaluation questions with attendant performance criteria were utilized in the final evaluation design. Without prescribed performance objectives, there is always the danger of conducting activities which do not necessarily relate to intended processes and products. Also, the absence of pre-determined management process objectives may have had a pejorative influence on the hierarchical decision-making system which was analyzed in the preceding section.

2. In the Input dimension, the data would indicate a need to inform school principals and other school personnel immediately and continually about their students' progress as they matriculate in the Program.

3. In the Process dimension, this Project displays certain shortcomings typical of many national first-year ventures. Decisions concerning line-staff relationships, student selection, cost benefits of the Program

on a per pupil basis, transportation of students, and integration or "normalizing" of the Project within the existing school system were frequently taken in an informal, ad-hoc manner as the Project unfolded in its initial year of operation.

4. The Product outcome that registered the least success was the CMI attitude test. EBCE students did not demonstrate impressive gains on the instrument, especially vis-à-vis their control or national norm counterparts. However, as explained in an earlier section, experimental-control comparisons were dubious, because of lack of homogeneity on the pre-test, and the evaluators remain unconvinced that this instrument accurately measures EBCE career attitudes. Also this instrument appears to be highly correlated with student academic achievement and it may not be sensitive to the special needs of the EBCE Program, especially for twelfth graders whose academic achievement at mid-year of their final academic year has already been determined and is unlikely to be affected by any treatment, let alone one that is of 16 weeks duration.

Coda

The EBCE Project was a highly successful venture, given its original aims and broad objective. Students demonstrated many tangible benefits and evidenced enthusiastic and positive attitudes towards the Program. It should be pointed out, although this is not an assigned of the third-party evaluator, that Title 1X requirements were met. Some difficulty was met in identifying and providing "non-traditional" work experiences for male and female students. However, RESA and the Project Director are aware of this shortcoming and have sought ways to accomplish this aim.

Another factor that may not be directly related to the evaluation design concerns the cost benefit of the Project. Currently, the per-pupil expense is approximately $3,500, or approximately two and a half times that of the Allegany County ratio. Based exclusively as an Allegany (as opposed to a regional, tri-county) Project, this figure would seem egregiously high. However, other factors need to be considered in this computation. During the first year, considerable expenses are incurred in planning, technical assistance, dissemination, and experimentation. These same costs are usually reduced or refunneled during the subsequent developmental stages of the venture. Moreover, increases in the number of students should also abate this cost and produce a cost-benefit ratio that is more compatible with the existing County proportion of approximately $1,300 (June 1976).

CHAPTER IV

RECOMMENDATIONS

Preface

The nature of the evaluation was twofold: formative and summative. Obviously, some recommendations and subsequent decisions were made formatively at various stages as problems arose and as the project developed during its initial year of operation. Thus, this section addresses those recommendations previously concerned with the summative component of the evaluation. The summative recommendations are presented in concert with the aforementioned structural guidelines. Phrased in general terms, these suggestions are intended to assist the Project planners and implementers in the future development of the Allegany County EBCE Project.

1. General Features of the Project

A. COMMUNITY SUPPORT

The evaluation team recommends that:

THE COMMUNITY ADVISORY COUNCIL BE ASSIGNED SPECIFIC TASKS TO BE CARRIED OUT BY SUB-COMMITTEES. THE MAIN FUNCTION OF THIS GROUP DURING THE SECOND PROJECT YEAR SHOULD BE TO ADVISE IN AN ACTIVE MANNER THE PROJECT PERSONNEL AND PROVIDE ALTERNATIVE SOLUTIONS IN SUCH TYPICAL PROBLEM AREAS AS: TRANSPORTATION, SITE SELECTION, SITE MAINTENANCE, PUBLIC RELATIONS, STUDENT PARTICIPATION, COMMUNITY-SCHOOL RELATIONS, AND THE LIKE. THUS, THE CAC SHOULD ASSUME A MORE ACTIVE ROLE AND PERFORM TASKS MUTUALLY AGREED UPON BY IT AND THE PROJECT PERSONNEL.

A STANDARD OPERATING PROCEDURE BE DEVELOPED BY THE PROJECT STAFF TO NOTIFY THOSE EMPLOYERS AND RESOURCE PERSONS WHOSE SITES DID NOT ATTRACT STUDENTS. GIVEN THE LARGE NUMBER OF POTENTIAL SITES, IT IS INEVITABLE THAT SOME CAREER SITES WILL NOT BE UTILIZED DURING ANY PARTICULAR PROJECT YEAR. EARLY NOTIFICATION SHOULD BE GIVEN TO THOSE RESOURCE PERSONS WHOSE SITES ARE NOT BEING UTILIZED IN ORDER TO MAINTAIN PROPER COMMUNICATION AND FOSTER CONTINUED COOPERATION FOR FUTURE UTILIZATION OF THAT SITE.

B. ACADEMIC QUALITY

With respect to the second Project year in which EBCE students will spend an entire year in the Program, it is recommended that certain procedural measures be added so as to assess the academic outcomes of students in a more precise and comprehensive fashion. The evaluation team suggests that:

THE COMPREHENSIVE TEST OF BASIC SKILLS (FORM S, LEVEL 4) BE ADMINISTERED ON A PRE/POST-TEST BASIS TO THE PARTICIPATING STUDENTS, UTILIZING THE READING, MATHEMATICS, SCIENCE, AND SOCIAL STUDIES SUB-SCALES. THE CTBS WILL PROVIDE AN IMPORTANT MEASURE OF THE ACADEMIC DIMENSION OF EBCE. EVEN MORE IMPORTANTLY, THE PRE-TEST RESULTS CAN SERVE AS VALUABLE DIAGNOSTIC AND PRESCRIPTIVE DATA FOR THE LEARNING COORDINATORS IN DEVELOPING THE INDIVIDUAL EDUCATION PLAN FOR THE STUDENTS.

WITHIN THE INDIVIDUAL STUDENT FILE PRESENTLY MAINTAINED BY THE LC, THERE SHOULD BE INCLUDED A SYSTEMATIC RECORD OF SPECIFIC ACADEMIC INFORMATION FOR COMPARATIVE ANALYSES OF STUDENTS' ACADEMIC PERFORMANCE BEFORE, DURING, AND AT THE CONCLUSION OF EBCE. SUCH INFORMATION MAY INCLUDE GRADE POINT AVERAGE, ACHIEVEMENT TESTS, ATTENDANCE RECORDS, AND OTHER SCHOOL RELATED DOCUMENTS. MOREOVER, THESE FILES SHOULD BE MAINTAINED FOR FOLLOW-UP PURPOSES.

C. GENERAL PROGRAMMATIC EFFECTS

The dimension of career skills and career attitudes is an important product outcome of EBCE. Since two of the most significant variables in career skills involve career decision-making and employability, the evaluators recommend that:

THE NEWLY DEVELOPED ETS-COLLEGE BOARD CAREER ASSESSMENT BATTERY IN CAREER DECISIONS AND EMPLOYABILITY BE ADMINISTERED DURING THE SECOND YEAR OF OPERATION FOR THE PURPOSE OF ASSESSING STUDENT CAREER GAINS.
SOME ATTEMPT SHOULD BE MADE TO ASCERTAIN THE RELATIONSHIP BETWEEN STUDENT CAREER ATTITUDES AND ACADEMIC ACHIEVEMENT.

11. Organizational Implementation

A. DECISION-MAKING

Considering recent developments and discussions concerning the managerial structure, the evaluators recommend that the steering Committee be discontinued and that:

THIS YEAR'S (1977-78) MANAGEMENT PLAN REFLECT THE RESTRUCTURED GOALS AND OBJECTIVES AND THAT THE ACTIVITIES AND PERFORMANCE CRITERIA BE DETAILED SYSTEMATICALLY WITHIN THE FOUR MAJOR PROJECT GOALS: PROJECT MANAGEMENT, STUDENT OUTCOMES, PROGRAM OUTCOMES, AND DEMONSTRATION/DISSEMINATION. THE EVALUATION TEAM FURTHER RECOMMENDS THAT THE PROJECT OBJECTIVES BE REFINED IN LIGHT OF THESE ESTABLISHED GOALS SO AS TO INSURE MEASURABILITY AND PERFORMANCE STANDARDS. MOREOVER, COORDINATION OF DECISIONS BETWEEN VARIOUS PROJECT PERSONNEL SHOULD BE IMPLEMENTED THROUGH A TEAM MECHANISM, IN WHICH AGENCIES SUCH AS THE BOARD OF EDUCATION ARE INCLUDED IN THE DISCUSSION OF MATTERS PERTINENT TO THEIR DOMAIN.

B. PROJECT DISSEMINATION AND PUBLIC RELATIONS

Under this rubric, the evaluators emphasize that:

INTERNAL PUBLIC RELATIONS WITH SCHOOL PERSONNEL AT ALL LEVELS SHOULD BE MAXIMIZED SO THAT THESE PERSONNEL ARE CONTINUALLY AWARE OF NOT ONLY THE AIMS OF THE PROJECT, BUT ALSO THE STATUS AND OUTCOMES OF THE STUDENTS AS THEY PARTICIPATE IN EBCE. A CONCERTED EFFORT BY THE PROJECT STAFF MUST BE DIRECTED TOWARD REGULAR COMMUNICATION WITH THE PRINCIPALS, GUIDANCE COUNSELORS, AND TEACHERS IN THE HOME SCHOOL. THIS IS ESPECIALLY IMPORTANT IN FOSTERING COORDINATION AND SUPPORT FOR THE NEW VENTURE.

C. PROJECT DEVELOPMENT AND REPLICATION

DURING THE SECOND YEAR, CONSIDERABLE ATTENTION MUST BE GIVEN TO CONTINUED PLANNING AND DEVELOPMENT TO MEET THE UNIQUE CONDITIONS OF THE LOCAL SCHOOL SYSTEM. SUCH MATTERS AS COST-BENEFIT (PER-PUPIL RATIO), TRANSPORTATION SCHEDULING AND EXPENSES, NORMALIZATION, AND INTEGRATION WITHIN THE CURRENT PROGRAMMATIC CLIMATE SHOULD BE CONSIDERED.

LASTLY, THE PRESENT EBCE PROJECT ADMINISTRATORS SHOULD ASSIST RESA AND THE MARYLAND STATE DEPARTMENT OF EDUCATION IN THEIR JOINT EFFORTS IN "NETWORKING" EBCE THROUGHOUT THE STATE. THIS ENTAILS MAXIMUM COOPERATION AND AVAILABILITY OF THE PRESENT PROJECT STAFF TO SHARE THEIR EXPERTISE WITH OTHER POTENTIAL ADOPTORS.

APPENDIX A

COMMUNITY SUPPORT

PARENT QUESTIONNAIRE RESULTS
1976-77 SCHOOL YEAR
EXPERIENCED-BASED CAREER EDUCATION

Parent views of (EBCE) Program's effectiveness N=15

		Likert Response
1.	The program has increased your childs motivation level toward school.	4.00
2.	Your son/daughter was aided in choosing a career.	4.00
3.	A saleable skill necessary for employment after graduation was acquired.	3.80
4.	Your child has a better understanding of the world of work i.e. job availability and necessary requirements.	4.40
5.	His/her career aspirations were enhanced as a direct result of the program.	4.13
6.	The one-to-one relationship with the learning coordinator and resource person has been adequate.	4.53
7.	On-site experience in actual work situations was provided.	4.46
8.	This experience was worthwhile and worth the time involved.	4.73
9.	His/her goals seem more clear and well defined after having participated in the program.	4.20
10.	Your son/daughter has been made aware of his/her individual aptitude for specific jobs or career aspirations.	4.33

Scale Used:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5

		Likert Response	
11.	He/she will have a greater chance of community employment as a result of his/her participation.	3.66	
12.	Full use of your communities' resources were made available.	3.93	
13.	Basic educational skills such as reading and mathmatics were adequately and professionally provided your child.	4.06	
14.	Your son or daughter will graduate with his/her graduating class.	4.33	
15.	Has your son or daughter talked with you concerning his/her goals, as a result of the program. Yes No	Yes 12 80%	No 3 20%

16. Comments: What could be done next year to improve the program?

- The program should last the full school year.
- More children should be allowed to join the program.
- The program should have its own set of standard textbooks.
- There should be better transportation provided for the students.
- It should begin the first of the school year.
- The students' school should be more involved in the work-study program.
- There should be more contact between EBCE and school to see how the student is doing.
- More work sites for actual experience and not just watching.
- Educate the community with the value of helping local students.
- Better inform the teachers and administrators about the program.

Listed areas of possible importance for a student to learn with parent ratings of their importance and the effectiveness of the EBCE program in accomplishing this learning.

	IMPORTANCE OF THIS LEARNING	EFFECTIVENESS OF THE EBCE PROGRAM IN ACCOMPLISHING THIS LEARNING
	Not Important 1 2 3 4 5 Highly Important	Not Effective 1 2 3 4 5 Highly Effective
	Likert Response	Likert Response
Students learn to:		
a. Perform specific occupational skills	4.60	4.13
b. Be punctual and organize their time	4.80	4.26
c. Assume responsibility for themselves	4.80	4.40
d. Make decisions and follow through	4.66	4.40
e. Communicate with others in a muture way	4.66	4.53
f. Be aware of more career opportunities	4.80	4.66
g. Work with others	4.86	4.60
h. Evaluate their own work	4.60	4.26
i. Perform basic academic skills	4.86	4.20
j. Think through and solve problems	4.73	4.13
k. Have a positive attitude toward self	4.80	4.28
l. Have a positive attitude toward work	4.80	4.28
m. Have a positive attitude toward learning	4.80	4.35
n. Prepare for further education	4.80	4.07
o. Improve interpersonal and social skills	4.73	4.00
p. Other (Please specity)	-	-

EMPLOYER QUESTIONNAIRE RESULTS
1976-77 SCHOOL YEAR
EXPERIENCED-BASED CAREER EDUCATION

N=44

Questions

1. Did the EBCE staff provide you with the necessary information to help you direct students' activities at your site?

   Inadequate 1/44 or 2% Adequate 39/44 or 89% Sometimes 1/44 or 2% NR 3/44 or 7%

2. Did the EBCE staff:

NR 2	Never Number	Never %	Infrequent/Sometimes Number	Infrequent/Sometimes %	Daily/Always Number	Daily/Always %
Show you the Student Activity Sheet(s)	2	5	25	57	15	34
Show you the Student Program Profile	2	5	23	52	17	37
Show you the type of products expected from student	9	20	18	41	14	32
Explain reason for the particular placement	-	-	19	43	23	52
Provide you with feedback on student's progress	8	18	17	37	17	37

3. Which of the following supportive services do you (or others at your site) provide for the Experience-Based Career Education (EBCE) program students? (Check each appropriate category.)

NR 2	Frequently Number	Frequently %	Occassionally Number	Occassionally %	Seldom Number	Seldom %	Never Number	Never %
Do you talk about job opportunities?	19	43	18	41	5	11	-	-
Do you talk about activities at your site?	33	75	9	20	-	-	-	-
Do you evaluate individual students' assignments?	26	59	10	23	2	5	4	9

	Frequently		Occassionally		Seldom		Never		
	Number	%	Number	%	Number	%	Number	%	NR
Do you talk about goal aspirations?	16	36	22	50	4	9	-	-	
Do you talk about career aspirations?	18	41	20	45	4	9	-	-	
Do you assist students in non-job related assignments?	9	20	13	30	9	20	10	23	3
Do you supervise students to perform a specific job-related task at your site?	32	73	8	18	-	-	2	5	2
Do you help plan student assignments?	26	59	6	14	3	7	7	16	2

4. How do students spend their time at your site?

	Frequently		Occassionally		Seldom		Never	
	Number	%	Number	%	Number	%	Number	%
Observing site activities	27	61	12	27	2	-	-	-
Researching from site activities	10	23	18	41	8	-	4	9
Actively performing site activities	35	80	5	11	2	-	-	-
Talking with you	25	57	15	34	2	-	-	-
Talking with other site personnel	29	66	11	25	1	-	-	-
Individual study	9	20	17	37	10	-	3	7

5. What is the degree of interest shown by the EBCE students at your site?

None				Great Deal
1	2	3	4	5

Likert Response 4.21

6. Based on EBCE students placed at your site, do you feel these students showed interest in the concept of EBCE?

Definitely No				Definitely Yes
1	2	3	4	5

Likert Response 4.50

7. How have the majority of employees at your site reacted to the EBCE students placed at your site?

Very Negatively	Negatively		Favorably	Very Favorably
1	2	3	4	5

Likert Response 4.26

8. How has top level management reacted to the EBCE students placed here?

Very Negatively	Negatively		Favorably	Very Favorably
1	2	3	4	5

Likert Response 4.36

9. Have you been satisfied with the feedback that you received relating to what happens to the student after he leaves your site?

Very Dissatisfied	Dissatisfied		Pleased	Very Pleased
1	2	3	4	5

Likert Response 3.25 No Feedback 2 NR 4

10. Do you think your company will continue working with the EBCE project during the next couple of years?

	Yes	No	Don't Know	NR
Number	34	0	8	2
Percent	77	0	18	

Explanations:
--Yes, because we are actively involved with training.
--Yes, if federal and state interest continues.
--Don't know, unless the program is revised.
--Don't know, because we are only a contractor and will leave when our present contract expires.
--Don't know, because the months we participate are slow ones for our company.
--Yes, because it is a most valuable learning experience

--Don't know, because of my position.
--Yes, but I would like a student that is more interested.
--Yes, high school students should be given the opportunity to evaluate jobs before pursuing a career.
--Don't know, because of facility room available.
--Don't know, having a single student created some problems.

11. Based on the students and staff you've met, how effective do you feel the program was?

Totally Ineffective	Ineffective		Effective	Very Effective
1	2	3	4	5

Likert Response 4.27 NR 3

12. Do you feel the program functioned as you were led to believe when you were recruited as an employer site?

	Yes	No	Don't Know	NR
Number	37	3	2	2
Percent	84	7	5 ✓	

Explanations:
--There should be more onsite observing of the students by the EBCE staff.
--Because the student was female, limited on the job activities were performed.
--Both students lacked the desire or had the requirements necessary to pursue our site experience.
--The placement at our site was too short a period to evaluate fairly.
--The student supplied had no real interest in the job.

13. What do you feel the strengths of the EBCE Program are?

--It gives the students the opportunity to plan their future.
--It provides management a resource for placement at a later date.
--Students have the opportunity to be on a job site.
--Students may actively participate in a job activity.
--The program contributes to personal development and self-confidence.
--Aids in career choice.
--Enhances interest in a particular career choice.
--Gives positive direction to students' aspirations.
--Gives first hand information about career opportunities.

14. What do you feel the weaknesses of the EBCE Program are?

--The students expected much more than they received.
--Too short a time at work site.
--Too little supervision.
--Employers lack of participation.
--Lack of adequate student orientation before starting the field placement.
--Cost effectiveness per student was disproportionate.
--Lack of ongoing site observations by EBCE staff.
--Follow-up information on students was lacking.
--Some students were not placed where they were qualified.
--Students were not placed where they could function.
--Students should work more closely with resource people instead of management.
--The availability of students at job time.
--The time availabiltiy of site personnel.
--Conditions in selecting students who participate.
--Obtaining students that are interested.
--Poor screening of students.

15. To what extent has the EBCE Program had an impact on. . . . .?

		How Much Impact			Value of Impact		
	No Impact	Some Impact	Much Impact	Don't Know	Good Impact	Bad Impact	Don't Know
a. Quality of work performed by regular employees	13	18	5	2	21	1	2
b. Amount of work performed by regular employees	15	19	2	3	15	1	4
c. Company hiring practices	25	5	1	6	9	1	6
d. Company training practices	19	10	3	5	13	-	3

Listed areas of possible importance for a student to learn with employer ratings of their importance and the effectiveness of the EBCE program in accomplishing this learning.

	Importance of Learning This	Effectiveness of the EBCE Program in Accomplishing this Learning
	Not Important — Highly Important	Not Effective — Highly Effective
	1 2 3 4 5	1 2 3 4 5
Students learn to:	Likert Response	Likert Response
a. Perform specific occupational skills	4.35	3.81
b. Be punctual and organize their time	4.73	4.07
c. Assume responsibility for themselves	4.73	4.34
d. Make decisions and follow through	4.61	3.84
e. Communicate with others in a mature way	4.69	4.36
f. Be aware of more career opportunities	4.66	4.50
g. Work with others	4.64	4.55
h. Evaluate their own work	4.42	3.71
i. Perform basic academic skills	4.28	3.78
j. Think through and solve problems	4.57	3.73
k. Have a positive attitude toward self	4.76	4.31
l. Have a positive attitude toward work	4.80	4.28
m. Have a positive attitude toward learning	4.76	4.28
n. Prepare for further education	4.52	4.31
o. Improve interpersonal and social skills	4.50	4.13
p. Other (please specify)		

EXPERIENCE-BASED CAREER EDUCATION

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Learning Coordinator

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MEETING RULES OF THE COMMUNITY ADVISORY COUNCIL OF THE EXPERIENCE-BASED CAREER EDUCATION PROGRAM OF ALLEGANY COUNTY

ARTICLE I - NAME

SECTION 1. Name. The name of this organization shall be referred to as the Community Advisory Council for the Experience-Based Career Education Program of Allegany County, hereafter referred to as the "Council."

ARTICLE II - OBJECTS

The objects of the Council are:

SECTION 1. To unite those individuals and representatives of business, labor, education, government, and all branches of commerce who are interested and profess to follow a standard to improve career education.

SECTION 2. To promote and maintain high standards of education for students.

SECTION 3. To provide a unified form of guidance and to assist the staff of the Experience-Based Career Education Program of Allegany County.

SECTION 4. To interact and assist in furtherance of the goals of the Experience-Based Career Education Program.

ARTICLE III - JURISDICTION

SECTION 1. The jurisdiction of the Council shall be to guide, consult, and make recommendations to the staff of the Experience-Based Career Education Program of Allegany County.

ARTICLE IV - MEMBERSHIP

SECTION 1. Membership on the Council shall be individuals, special interest groups, industry, business, labor, and education.

ARTICLE V - QUALIFICATION AND ELECTIONS

SECTION 1. Qualification. A Council member shall obtain and retain membership based upon satisfactory evidence that he or she is continually interested in the objectives of the Experience-Based Career Education Program, that he or she shall genuinely participate both through attendance and through other sources to assist the staff of the Experience-Based Career Education Program.

SECTION 2. The procedure for election to the Council membership shall be as follows:

(a) The then present membership of the Council shall by majority vote approve the individual.

(b) The Program Director may appoint a Council member at his or her discretion. Confirmation will be by majority vote of the Council.

ARTICLE VI - PRIVILEGES AND OBLIGATIONS

SECTION 1. The privileges and obligations of the Council members, in addition to those already expressed, shall be to conform to the by-laws and administrative policy of the Experience-Based Career Education Program of Allegany County.

ARTICLE VII - OFFICERS

SECTION 1. (a) The elective officers of the Council shall be two co-chairpersons. They shall be elected for a term of one (1) year.

(b) There shall be one or more liaison person(s), who is/are a full-time employee of the Experience-Based Career Education Program staff, appointed by the Program Director, who shall interact and assist the elected officers and Council members.

SECTION 2. Duties of the Officers. The duties of the officers shall be such as their titles, by general usage, would indicate and such as may be assigned to them by the Council.

SECTION 3. Election of Officers. The annual election of officers shall be preceded at least ten (10) days by a report from the nominating committee of three members who shall be appointed by the co-chairpersons with the approval of the Council. The nominating committee shall nominate one or more candidates for each office. The report of the nominating committee shall be made before the election of officers. Additional candidates for the office to be filled may be placed in nomination from the floor at this same meeting.

(a) The election of officers shall take place at the annual meeting. Election shall be by ballot and votes may be cast in person or by proxy. The ballot shall contain the names of all candidates and the offices for which they are nominated.

(b) The co-chairpersons, with the approval of the Council, shall appoint an election committee of three (3) Council members to conduct the election. In case of a tie vote, the issue shall be determined by lot.

SECTION 4. Vacancies. Vacancies among the officers shall be filled by the Council members until the next annual election.

ARTICLE VIII - MEETINGS

SECTION 1. The annual meeting of the Council shall be held during September of each year. The date, the place, and the hour will be designated by the Council.

SECTION 2. Meetings of Council. The Council meetings, time and place shall be held at such times as the co-chairpersons, or Council members may designate.

SECTION 3. Notice of Meetings. Notice of meetings shall be given to each Council member at least one week preceding all meetings.

SECTION 4. Quorum. A quorum for the transaction of business shall consist of seven (7) Council members.

ARTICLE IX - COMMITTEES

SECTION 1. The co-chairpersons shall appoint, subject to the confirmation of the Council members, such committees as deemed necessary.

SECTION 2. Organization. All committees shall be of such size and shall have such duties, functions and powers as may be assigned to them by the co-chairpersons or by the Council, except as otherwise provided in these rules.

ARTICLE X - RULES OF ORDER

SECTION 1. Robert's Rules of Order, latest edition, shall be recognized as the authority governing the meetings of the Council, its Council members and committees, and in all instances wherein its provisions do not conflict with these rules.

ARTICLE XI - AMENDMENTS

SECTION 1. These rules may be amended by a majority vote of the active members present at any meeting at which a quorum is present. There shall be no mandatory notice on the agenda for this article.

ARTICLE XII - ABSENCES

SECTION 1. In the event that the co-chairpersons are both absent from the called meeting then the majority of those present shall elect a temporary chairman for the purpose of the conducting of said meeting. However, if the co-chairpersons have designated a person, in writing, prior to the meeting then the quorum present shall not elect a temporary chairman and the designate of the co-chairpersons shall have the title of the temporary chairperson.

E.B.C.E. ADVISORY COUNCIL

NOVEMBER 19, 1976

The first meeting of the E.B.C.E. Advisory Council was held on November 19, 1976, at the Western Maryland Vocational Resource Center. Mr. Glenn U. Hanna, Supervisor of Pupil Personnel, Allegany County Board of Education, chaired the meeting.

Mr. Hanna opened the meeting by remarking on its two-fold purpose: 1) to give Advisory Council members information about the E.B.C.E. program, and 2) to ask the assistance of the Advisory Council. Mr. Hanna directed the attention of the members to their folders, each of which contained copies of the following: 1) list of Advisory Council members; 2) selection criteria; 3) program objectives and description, 4) Advisory Council meeting rules; 5) student interest card; and 6) the agenda for the meeting. The roll was called from the list of Council members and introductions were made all around. After introducing the Council members, Mr. Hanna then introduced the E.B.C.E. staff, a representative from the Appalachia Educational Laboratory, and the project's third party evaluators.

Mr. Hanna's opening remarks cited the need for the E.B.C.E. program in Allegany County. He outlined the findings of two surveys which showed students' interest in career information and career education, and concluded that lack of knowledge of career opportunities in this country is widespread. Stronger career education is needed.

The E.B.C.E. project in Allegany County will be a demonstration project and will be evaluated by several different groups. In the State of Maryland, career education may possibly be implemented in the school systems throughout the State. Mr. Hanna concluded his remarks and introduced Dr. Wayne W. Hill, Superintendent of Schools in Allegany County.

Dr. Hill expressed the hope that the building in which the Council was meeting was safe, because the E.B.C.E. project could not afford to lose such valuable and dedicated people. Dr. Hill cited the need for the community's help and cooperation. The E.B.C.E. project in Allegany County is on the "cutting edge;" with this project, the County adds another first to a school system already distinguished in the areas of curricula, sports, and standards of student behavior. The E.B.C.E. project will utilize the Advisory Council's knowledge of work in the real world; it will depend on the Advisory Council for guidance and support. The E.B.C.E. project is expensive because it is a pilot project; when it is implemented in the schools, however, maintenance costs are expected to be low. Dr Hill asked that if, in the opinion of the Advisory Council, the E.B.C.E. project was not a good program, then this opinion should be communicated to the Board of Education. He said that educators tend to see things in a homogeneous fashion; hence the value of the Advisory Council in providing a broad perspective and fresh input.

Mr. Hanna thanked Dr. Hill and introduced Mr. George Allen, Director of the Regional Education Service Agency. Mr. Allen said that R.E.S.A. is composed of the Boards of Education of Allegany, Garrett, and Washington Counties, the two community colleges, Frostburg State College, and West Virginia University. The E.B.C.E. project is the result of the cooperation begun in 1976 among all participants of R.E.S.A. It is an opportunity for people in the community to personally interact with students and actually teach them about the real world of work; thus, both students and members of the community benefit. The challenge of E.B.C.E. will be twofold: 1) to be successful, and 2) to integrate the model into the schools.

Mr. Hanna thanked Mr. Allen and introduced Mr. C. Steven Hyre, Director of Training and Coordination at the Appalachia Educational Laboratory in Charleston, West Virginia. Mr. Hyre gave a short history of the E.B.C.E. program in Charleston and a description of their Advisory Council. The biggest thing the community of Charleston gave to E.B.C.E. was their "can do" attitude. Mr. Hyre then presented a slide/tape of the E.B.C.E. program in Charleston.

After the presentation, Mr. Hyre covered some essential points of the E.B.C.E. program: 1) it is tuition free; 2) it is individualized; 3) it is an alternative program; and 4) it combines academics and career education. He complimented the Board of Education, R.E.S.A., the E.B.C.E. staff, and the third party evaluators for their efforts thus far and outlined what the project would probably accomplish by the end of the first year. He emphasized the positive reactions of students around the country to the E.B.C.E. concept.

Mr. Hyre then indicated that he would answer questions from the floor. Mr. Lou Baker wanted to know how students would be selected. Mr. Hyre said that students who are interested in the program talk it over with their parents, teachers, and guidance counselors, and then apply for admission into the program. Mr. Baker also wanted to know why more students were not getting into the program in Charleston. Mr. Hyre responded that due to the peculiar geography of Kanawha County, transportation was a problem for students from outlying areas.

Mr. Hanna then introduced Dr. Gene Hall of the R.E.S.A. staff, and one of the members of the third party evaluation team for E.B.C.E. Dr. Hall said that R.E.S.A. is coordinating the evaluation effort and is acting as a liaison between R.E.S.A. and the evaluation team from

West Virginia University. He sees the evaluation process as one that requires a team effort and the concern of everyone involved in the E.B.C.E. program. Dr. Hall then introduced Dr. Larry Stead of the Office of Research and Field Services, West Virginia University.

Dr. Stead gave a brief description of the Office of Research and Field Services. He said that the evaluators are problem solvers and that they want to be helpful. They are not critics; they do not want to prove anything, but to help improve the E.B.C.E. program. Dr. Stead described the Stufflebeam C.I.P.P. model: this is the model that will be used to guide the evaluation of the E.B.C.E. project in Allegany County. It is comprised of four evaluation components: context, inputs, processes, and product. The E.B.C.E. program will be evaluated in each area. The third party evaluators are familiar with the region, and have for the last six years evaluated various programs in the Tri-State area.

Mr. Hanna then directed the attention of the Advisory Council to the selection criteria sheets in their folders and invited their comments. Miss Margaret Jones asked if a student's entrance into the E.B.C.E. program would be determined by their academic ability. Mr. Hanna replied that the program would be open to a broad spectrum of students, both high achievers and low achievers. Mr. Cook wanted to know how a student would have a choice in site selection. Mr. John Valenzano, Learning Coordinator with E.B.C.E., replied by describing the student's orientation during the first week of the E.B.C.E. program. At this time, the student would be given a battery of tests to determine basic skills, career maturity, attitudes, and aptitudes. Based on the results of these tests and the student's academic program, he would then be matched with an experience site that matched his career interests.

Mr. Lou Baker wanted to know if the Learning Coordinators would check the track records of students, i.e., grades, attitudes, absenteeism, etc. Mr. Hanna replied that students' records would probably be taken into account, but that admission would depend more on the recommendations of the students' teachers, guidance counselors, and principals. Mr. Baker pointed out that the E.B.C.E. program in Charleston experienced a lot of improvement with students in whom absenteeism had been a problem while they were in school.

Mr. Valenzano pointed out that it was important for E.B.C.E. to establish good relations with school principals and to be honest with students and make every effort to acquaint them with all aspects of the E.B.C.E. program.

Mr. Hanna then opened the meeting for discussion of business, specifically selection criteria for students. Mr Richard Blair wanted to know when students would be selected for the program. Mr. Tom Elliott, Learning Coordinator for E.B.C.E., responded by saying that the E.B.C.E. staff would be going to the schools and talking to students at the end of November and during the month of December. Recruitment would begin in December and the program would begin in February. Mr. Blair then asked about students who are taking highly specialized courses and whether or not there would be a place for them in E.B.C.E. Mr. Hanna said that students taking highly concentrated academic courses probably would not opt for E.B.C.E. Mr. Elliott added that E.B.C.E. will have curricula for physics, analytical math, etc. These courses would be applied in the student's experience at the work sites, with the result that they might be of more depth than they would be in a classroom. The grading might be tougher than in the school setting, and the students may find themselves working harder than they do in school.

Mr. Blair said that his son is a senior in high school and wants to go to college; how would participation in E.B.C.E. affect his chances of admission to college? Mr. Hyre responded by saying that E.B.C.E. is a competency-based program. At the onset of the program in Charleston, A.E.L. contacted thirty colleges and advised them of the E.B.C.E. operations. The colleges indicated that they would welcome E.B.C.E. students. Mr. Valenzano said that the parents of students at Bishop Walsh High School indicated high interest in the program. He went on to describe a situation in which a student had studied German for four years. How would E.B.C.E. accomodate him? In this case, perhaps an independent study program in German could be arranged for the student in the home school.

Mr. Pellerzi brought up the problem of teachers, guidance counselors, and principals who would be recommending a student for E.B.C.E. all having different concepts of the program. In other words, a teacher might recommend a student for E.B.C.E. but the student's guidance counselor and principal might not. He felt that the selection criteria needed more delineation to better enable educators to recommend students to the program. A principal might feel that a student would be better off in his or her home high school and not in the E.B.C.E. program. Mr. Jim Wilson responded by saying that the main reason Allegany County decided to adopt the A.E.L. model was its strong curriculum. There are a great variety of learning concepts and courses available. Mr. Hanna noted Mr. Pellerzi's comment would be taken under advisement. Mr. Pellerzi then asked if a student taking high level math courses would be better off staying in his home school where the quality of his academic program is a known quantity. Mr. Jim Wilson said that if the supervisors at the Board of Education did not feel that the courses at E.B.C.E. would be as good as those in the schools, then they would not have agreed to have the program in the first place.

Mr. Tom Elliott described Activity Sheets and how they would be an integral part of each student's academic program; how different curricula could be combined in each Activity Sheet. Mr. Hanne noted

APPENDIX B

WATSON - GLASER

CRITICAL THINKING APPRAISAL

WATSON-GLASER CRITICAL THINKING APPRAISAL

1976-77 SCHOOL YEAR

EXPERIENCED-BASED CAREER EDUCATION

	N	Pre-test $\bar{X}$	Post-test $\bar{X}$
Experimental Group	24	60.54	57.04
Control Group	23	55.22	53.09
		α .0109	α .06025

	N	Pre-test $\bar{X}$	Post-test $\bar{X}$	
Experimental Group	24	60.54	57.04	α .0959

	N	Pre-test $\bar{X}$	Post-test $\bar{X}$	
Control Group	23	55.22	53.09	α .1727

CRITICAL THINKING APPRAISAL SCORES CONVERTED TO PERCENTILE NORMS AND STANINES

	Pre-Test (Form Ym)			Post-Test (Form Zm)		
Group	X Raw-Score	%Score	Stanine	X Raw-Score	%Score	Stanine
Experimental	60.54	36	4	57.04	42	5
Control	55.22	18	3	53.09	28	4

APPENDIX C

PROGRAMMATIC-EFFECTS

EBCE

CMI COMPETENCE

	Control		Experimental	
	Pre	Post	Pre	Post
PART I	13.26	14.09	13.50	14.88
PART II	15.74	17.13	15.17	16.88
PART III	13.65	14.00	13.08	14.50
PART IV	12.91	13.78	13.46	14.54
PART V	11.48	12.35	11.00	11.54

CMI Competence

	N		Pre-Test X		Post-Test X	Significance
PART I						
E	24	(41%)	13.50	(66%)	14.88	.45
C	23	(33%)	13.26	(52%)	14.09	NS
Significance			NS		NS	
% Conv. Mean					14.15	
PART II						
E	24	(42%)	15.17	(65%)	16.88	.02
C	23	(53%	15.74	(65%)	17.13	.04
Significance			NS		NS	
% Conv. Mean					14.43	
PART III						
E	24	(37%)	13.08	(51%)	14.50	.06
C	23	(42%)	13.65	(42%)	14.00	NS
Significance			NS		NS	
% Conv. Mean					12.90	
PART IV						
E	24	(47%)	13.46	(59%)	14.54	NS
C	23	(47%)	12.91	(53%)	13.78	NS
Significance			NS		NS	
% Conv. Mean					11.89	
PART V						
E	24	(56%)	11.00	(66%)	11.54	NS
C	23	(56%)	11.48	(66%)	12.35	NS
Significance			NS		NS	
% Conv. Mean					9.50	

E&C POST-TEST
VS. % CONV. SCORES
($\overline{X}$ = 50%)

PART I KNOWING YOURSELF

	Pre-Test	Post-Test	Pre/Post % Gain
E	- 9%	+16%	+25%
C	-17%	+ 2%	+19%

PART II KNOWING ABOUT JOBS

	Pre-Test	Post-Test	Pre/Post % Gain
E	- 8%	+15%	+23%
C	- 3%	+15%	+18%

PART III CHOOSING A JOB (GOAL SELECTION)

	Pre-Test	Post-Test	Pre/Post % Gain
E	-13%	+ 1%	+14%
C	- 8%	- 8%	0%

PART IV LOOKING AHEAD (PLANNING)

	Pre-Test	Post-Test	Pre/Post % Gain
E	- 3%	+ 9%	+12%
C	- 3%	+ 3%	+ 6%

PART V WHAT SHOULD THEY DO? (PROBLEM SOLVING)

	Pre-Test	Post-Test	Pre/Post % Gain
E	+ 6%	+16%	+22%
C	+ 6%	+16%	+22%

CMI COMPETENCE ANALYSIS OF STUDENT POST-TEST SCORES BY PERCENTILE CONVERSION SCORES

E&C Group Post-Test Means vs. % Conv. Mean

PART I	E	C	E/C
14.15	+ .73	- .06	+ .79
PART II			
14.43	+2.45	+2.70	- .25
PART III			
12.90	+1.60	+1.10	+ .50
PART IV			
11.89	+2.65	+1.89	+ .76
PART V			
9.50	+2.04	+2.85	- .81

CAREER MATURITY INVENTORY ATTITUDE SCALE (FORM A-1)

1976-77 SCHOOL YEAR

EXPERIENCED-BASED CAREER EDUCATION

	N	Pre-test $\overline{X}$	Post-test $\overline{X}$
Experimental Group	24	37.00	37.63
Control Group	23	32.96	35.70
		α .0022	α .10035

	N	Pre-test $\overline{X}$	Post-test $\overline{X}$	
Experimental Group	24	37.00	37.63	α .32375

	N	Pre-test $\overline{X}$	Post-test $\overline{X}$	
Control Group	23	32.96	35.70	α .0357

CMI POST-TEST ATTITUDE SCORES CONVERTED TO PERCENTAGES/NATIONAL MEAN

	Pre-Test	Post-Test
Experimental	35%	43%
Control	10%	24%

Experimental	Control	National Mean
37.63	35.70	38.97

STUDENT QUESTIONNAIRE RESULTS
1976-77 SCHOOL YEAR
EXPERIENCED-BASED CAREER EDUCATION

STUDENT VIEWS OF PROGRAM EFFECTIVENESS:

(N=24)	Likert Response
1. The program has increased your motivation level toward school.	3.40
2. It exposed you to the world of work and thus aided your decision-making process.	4.25
3. You were given the opportunity to pursue your interest area.	4.38
4. The objectives of the EBCE Program were clearly defined to you.	3.96
5. You were aided in choosing a career.	4.30
6. By participating in the program you acquired a saleable skill necessary for employment after graduation.	4.21
7. You now have a better understanding of the world of work i.e. job availability and necessary requirements.	4.30
8. The program increased your ability to work with others.	4.13
9. The one-to-one relationship with the learning coordinator has been adequate.	4.21
10. On-site experience in actual work situations was provided.	4.42
11. The experience was worthwhile and worth the time involved.	4.67
12. You are now more aware of your individual aptitude for specific jobs or career aspirations.	4.34

		Likert Response
13.	A greater chance of community employment now exists for you as a result of your participation in EBCE.	4.05

Scale Used:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5

Likert Responses Continued

14.	How well did the EBCE compare to your past school experience?	Much Worse 1	2	3	4	Much Better 5
					4.63	
15.	How would you rate the EBCE staff in relation to past teachers?	Poor 1	2	3	4	Excellent 5
					4.75	
16.	As a result of the program, you have talked with your parents concening your goals.	None 1	2	3	4	Much More 5
					4.13	
17.	Your self perceptions have improved.	Definitely Yes 1	2	3	4	Definitely No 5
					1.84	
18.	Your attitudes towards self have been enhanced.				2.13	
19.	Your attitude towards work has improved.				2.13	
20.	Your ability to solve problems has increased.				2.17	
21.	The (EBCE) program aided you in improving interpersonal social skills.				2.00	
22.	As a result of the program your occupational plans are:	None 1	2	3	4	Very Firm 5
					4.38	

23. Student comments on how to make the program more effective were:

- --No change/effective as is (9)
- --Add more students. (4)
- --The time should be increased to one full year. (2)
- --The entire /24/ students should come together for a sharing of ideas. (2)
- --There should be better means of student transportation.
- --A need exists for a greater variety of job sites.
- --Definitely more schools should participate.
- --More teachers should be educated about the program goals.
- --More resource persons should be educated about the programs' goals.
- --The initial explanation about the programs should be better.

24. Students listed the least desirable aspects of the program as being:

- --the need for more time 'in house'
- --the need for more counselors
- --too much paperwork
- --More public awareness of the program is necessary.
- --A student should have the right to terminate a job site.
- --single goal direction of the program

25. The most desirable aspects of the program were:

- --the work experience itself (14)
- --meeting new people (5)
- --more freedom (4)
- --the one-to-one coordination with the Learning Coordinator (3)
- --It met individual needs. (2)
- --indepedence and a good way to find better jobs (2)

26. Additional comments included:

- --The program was very enjoyable. (9)
- --It was very worthwhile. (9)
- --It provided extremely valuable work experience. (2)
- --A definite need to continue exists. (2)
- --The program is needed for a full year.
- --Some students did very lettle at the job sites.
- --The teachers were nice, helpful and more concerned.
- --It actually helped me get a job at my highest interest site, and I highly commend the program.

Listed areas of possible importance for a student to learn with student ratings of their importance and the effectiveness of the EBCE program in accomplishing this learning:

	IMPORTANCE OF THIS LEARNING	EFFECTIVENESS OF THE EBCE PROGRAM IN ACCOMPLISHING THIS LEARNING
	Not Important 1 2 3 4 5 Highly Important	Not Effective 1 2 3 4 5 Highly Effectiv
Students learn to:	Likert Response	Likert Response
a. Perform specific occupational skills	4.13	4.09
b. Be punctual and organize their time	4.34	4.18
c. Assume responsibility for themselves	4.67	4.44
d. Make decisions and follow through	4.50	4.40
e. Communicate with others in a mature way	4.46	4.57
f. Be aware of more career opportunities	4.42	4.61
g. Work with others	4.55	4.57
h. Evaluate their own work	4.55	4.40
i. Perform basic academic skills	4.21	4.26
j. Think through and solve problems	4.30	4.40
k. Have a positive attitude toward self	4.63	4.48
l. Have a positive attitude toward work	4.59	4.53
m. Have a positive attitude toward learning	4.46	4.61
n. Prepare for further education	4.30	4.44
o. Improve interpersonal and social skills	4.34	4.40
p. Other - Outlook into career possibilities (1 response)	5.00	5.00
- Adventurous learning in a non-traditional way (1 response)	5.00	5.00

E.B.C.E. GRADUATES - 1977

FIRST FOLLOW-UP

Student #1

Working at the Pharmacy at Sacred Heart Hospital this summer and plans to attend Allegany Community College this fall.

Student #2

Working for the C.E.T.A. program this summer and plans to attend Allegany Community College this fall, majoring in secretarial science.

Student #3

Working full-time at I.B.M. in Oakland and plans to attend Garrett Community College this fall, majoring in business.

Student #4

Working at Long John Silver's this summer and will be attending Juniata College this fall.

Student #5

Working this summer at the City of Cumberland Engineering Department with the possibility of full-time employment with them starting this fall. He plans to attend Allegany Community College, possibly next spring.

Student #6

Working part-time at the Algonquin Hotel and will be attending Frostburg State College this fall.

Student #7

Working at Spoerl's Pontiac and will be attending Allegany Community College this fall, majoring in automotive mechanics.

Student #8

Working at Three Star Services. Does not plan to attend college, but plans to become a State Trooper at some time in the future.

Student #9

Working at the Department of Natural Resources this summer and will be attending the University of Maryland this fall, majoring in medical technology.

Student #10

Working as a waitress and has no plans for college.

Student #11

Working full time at the Gee Bee Department Store and has no plans to attend college.

Student #12

Not working this summer, uncertain about college. Possibility of going to work for the Health Department this fall.

Student #13

Living at home with her mother.

Student #14

Working full-time at Kelly-Springfield Tire Company.

Student #15

Working this summer doing babysitting and will attend Allegany Community College this fall, majoring in medical secretarial science.

Student #16

Working at the Times-News (newspaper) and has made no plans to attend college.

Student #17

Working for Roadway Express and has no plans to attend college.

Student #18

Working part-time at Potomac Valley Animal Hospital and will attend Potomac State College this fall.

Student #19

Working in Indiana at a ladder manufacturing company and may possibly attend Allegany Community College this fall.

Student #20

Working for Goodwill Industries as part of the C.E.T.A. program but has no plans to attend college this year.

Student #21

Working in her father's office this summer and will be attending Stevens College this fall, majoring in fashion design.

Student #22

Working at Edgwood Arsenal this summer and will be attending Georgetown University this fall (pre-law).

Student #23

Working part-time at Potomac Valley Pharmacy this summer and has no plans to attend college.

Student #24

Will be attending Virginia Commonwealth University this fall, majoring in art.

EXPERIENCE-BASED CAREER EDUCATION

PLACEMENT OPPORTUNITIES FOR STUDENTS

SITES	JOB TITLES
1. ALGONQUIN MOTOR INN	Desk Clerk Assistant Chef Housekeeper Maintenance Person
2. ALLEGANY BALLISTICS LABORATORY	Secretary - Personnel
3. ALLEGANY COUNTY BOARD OF EDUCATION	Transportation Aide
4. ALLEGANY COUNTY CENTRAL TAX OFFICE	Accounting Clerk Bookkeeping Clerk Tracer
5. ALLEGANY COUNTY HEALTH DEPARTMENT	Secretary
6. ALLEGANY COUNTY SHERIFF'S DEPT.	Radio Dispatcher Cruiser Patrol
7. THE ALLEGANY SHOPPER	Reporter Receptionist Ad Solicitor
8. AU PETIT PARIS	Chef
9. BARTON'S COFFEE HOUSE & RESTAURANT	Dishwasher Waitress
10. BLUE CROSS/BLUE SHIELD OF MARYLAND	Secretary
11. BOY SCOUTS OF AMERICA - POTOMAC COUNCIL	Receptionist Secretary
12. BOYS FORESTRY CAMPS	Caseworker
13. BRADDOCK JUNIOR HIGH SCHOOL	Social Studies Aide
14. CITY OF CUMBERLAND ENGINEERING DEPT.	Project Planner Survey Crew Draftsman
15. CITY OF CUMBERLAND POLICE DEPT.	Dispatcher Foot Patrolman Cruiser Patrolman Detective Training Sergeant

16.	CITY OF CUMBERLAND WATER DEPT.	Project Planner Survey Crew Draftsman
7.	CLERK OF THE COURT	Law Clerk Equity Clerk Recording Clerk Marriage & License Clerk
18.	COMPUTER LAB - VO-TECH CENTER	Key Punch Operator
9.	CUMBERLAND BRANCH LABORATORY OF THE MD. STATE DEPT. OF HEALTH	Medical Technologist
0.	CUMBERLAND STREET DAY CARE CENTER	Teacher Aide
21.	DRUG FAIR	Pharmacist Clerk
22.	DR. THOMAS P. FROM, VETERINARIAN	Vet's Assistant
3.	GATEWAY TRAVEL CENTER	Reservations Agent
24.	HAFER FUNERAL HOMES	Bookkeeper Funeral Director
25.	HOLIDAY INN	Desk Clerk Chef
26.	HUMAN RESOURCES & DEVELOPMENT	Secretary Senior Citizens Project Aide
27.	INSTRUCTIONAL MEDIA CENTER	Secretary File Clerk Library Aide
28.	KELLY-SPRINGFIELD TIRE COMPANY	Secretary Advertising Associate
29.	C.C. KOTTCAMP CONSTRUCTION CO.	Electrical Worker (IBEW) Plumber & Pipefitter
30.	LAYMAN'S SUPPLY	Hardware Clerk
1.	LIONS MANOR NURSING HOME	Nursing (Geriatrics)
32.	MOTOR CITY BODY SHOP	Auto Body Repairman
33.	NATIONAL JET COMPANY	Micro-Tool Maker Electronics Technician
4.	DEPARTMENT OF NATURAL RESOURCES	Chemist Wildlife Manager Forester Mine Inspector Secretary

35.	NICHOLSON AIR SERVICES	Ticket Agent Mechanic Pilot Freight Handler Administration
36.	PESKIN'S	Fashion Coordinator
37.	POTOMAC ANIMAL HOSPITAL	Veterinarian's Assistant
38.	POTOMAC MOTORS	Sales Manager Line Mechanic
39.	POTOMAC VALLEY TELEVISION CO.	News Director
40.	REGISTER OF WILLS & CLERK OF ORPHANS COURT	Register Of Wills Chief Deputy Clerk Deputy Register of Wills Clerk
41.	RICE HOME IMPROVEMENT	Construction Worker
42.	RUHL'S STUDIO	Photographer Receptionist
43.	SACRED HEART HOSPITAL	Offset Operator Trayline Worker Dietary Aide Unit Clerk-Food Service Receiving Clerk Storeroom Clerk Pharmacy Stationary Engineer Laundry Worker Housekeeper Maintenance Person X-Ray Technician Respiratory Therapist Purchasing Clerk Physical Therapist
44.	SPOERL'S PONTIAC/CADILLAC	Sales Person Line Mechanic Auto Body Repairman Parts Chaser
45.	STATE FARM INSURANCE	Sales Representative
46.	STATE'S ATTORNEY	Law Clerk
47.	THREE STAR SERVICES	Secretary Retail Clerk
48.	TRI-STATE OXYGEN & BOTTLED GAS	Warehousing, Shipping, Receiving

	[illegible] JUNIOR HIGH SCHOOL	Art Teacher Aide
50.	W.C.B.C. RADIO	News Writer Script Writer Tape Editor
51.	WESTERN MD. VOCATIONAL RESOURCE CENTER	Media Technician
52.	WESTVACO	Key Punch Operator Bookkeeper Quality Control Technicia Purchasing Agent Secretary
53.	WILSON WELDING CO.	Accountant Purchasing & Inventory Warehousing, Shipping & Receiving Route Salesman
54.	W.T.B.O. RADIO	News Writer Scriptwriter Tape Editor
55.	Y.M.C.A. DAY CARE CENTER	Teacher Aide

APPENDIX D

ADMINISTRATIVE DECISION-MAKING

ADMINISTRATIVE QUESTIONNAIRE FOR RESA AND BOARD OF EDUCATION REPRESENTATIVES

1976-77 SCHOOL YEAR

EXPERIENCE-BASED CAREER EDUCATION

A. PLANNING

1. How were you involved?
2. Were you involved in developing the format for the Program?
3. As you see it, what are the major objectives of the Program (i.e., needs assessment; feasibility)?
4. What degree of congruence exists between Project experiences and planned objectives?

B. COORDINATION

1. Were there any particular management strategies employed in the initial planning of the EBCE Program?
2. A. How were personnel coordinated?
   B. How were you involved in this coordination?
3. A. How do you see the relationship of the BOE and RESA?
   B. How well coordinated are they?
4. How do you view the relationship between the BOE and the Project Director?
5. How do you view the relationship between the Regional Education Service Agency and the Project Director?
6. How have you been involved in the monitoring of key personnel?
7. Did you have any control over the coordination process?
8. Did you exercise any control over the coordination component?

9. How do you view the authority distribution in the EBCE Program?
10. Who is responsible for dissemination of the products of the EBCE Program (Public Relations; all external reporting)? Who is actually in charge of dissemination?
11. How well does internal communication function?

C. COMMUNITY INPUT

1. What was the nature of your capacity in the Advisory Council?
   a. What do you see as the objectives of the Advisory Council?
   b. What were the major accomplishments of the Advisory Council?
   c. Concerning the Council, were any major problems encountered?
   d. What was the relationship of the Council to employers and sites?

D. REPLICATION AND EXPANSION

1. What has been done regarding replication and expansion to other parts of the Appalachian Maryland region (concerning human resources and financial resources)?
2. What prospects exist for continuation beyond the three year federal funding period?

E. APPLICATION OF THE AEL MODEL IN APPALACHIAN MARYLAND

1. How appropriate is the AEL Model for Appalachian Maryland?
2. Is the instructional format of'four days out and one day in' adequate?
3. Is the number of students per LC in proper ratio?
4. Which class benefits most from the EBCE program seniors or juniors?
5. Is the time at the sites adequate?
6. What duration of the Program do you favor? (one semester or one year).
7. Do you see any alienation of participating students in the EBCE Program from their home high school?
8. Selection (of students) criteria?
   What criteria were developed/used in the selection of students?

CRITERIA OF STUDENT SELECTION

1. Student voluntarily chooses the program.
2. Students are seniors.
3. Students need no more than five credits for graduation.
4. Students have no major conflicts in schedules.
5. Students complete an E.B.C.E. interest form.
6. Student has recommendation of his/her principal.
7. Student has recommendation of his/her quidance counselor.
8. Student has recommendation of his/her teachers.
9. Student has the consent of his/her parents.
10. E.B.C.E. sites meet the career interest of the student.

9. How does this Program relate to other alternative programs (such as, work-release, work-study, vo-tech, and other Career Education programs)?

F. How does EBCE provide a "method to effectively integrate these programs (other career education programs)" and this history of experience into the school systems through alternative education now endorsed by the Maryland State Department of Education (i.e., 'Personalized Programs') = Personalized Performance-based Instruction?

G. One concern of educators involves the lack of counseling supposedly associated with a Career Education project which is designed like the AEL Model. Can you defend the contention that this Project provides the student with the necessary counseling and guidance?

STAFF INTERVIEWS

1976-77 SCHOOL YEAR

EXPERIENCED-BASED CAREER EDUCATION

1. Describe the process used to select EBCE students.
2. Was it efficient and effective?
3. What role did you play in the academic preparation and instruction of the students?
4. How can the Project be expanded to other schools in the county/region?
5. What were the major benefits of the Project for the participating students?
6. What were the major short-comings of the Project during the first year?
7. What recommendations do you have for improvement?
8. Were the parents satisfied with the academic quality of EBCE?
9. Were the career sites adequate in number and educational in nature?
10. Were the lines of communication between this Project and other agencies (i.e., RESA, schools, BOE, *et al*.) properly maintained?
11. Were the resource persons adequately trained to work with the students at the career placement sites?

APPENDIX E

PROJECT DISSEMINATION AND PUBLIC RELATIONS

CUMULATIVE RESPONSE SHEET FOR EBCE PRINCIPAL INTERVIEW

1. Did the EBCE staff provide you with adequate information regarding the goals and operation of the program?

	Yes
Flintstone	X
Bruce	X
BW	X
Alleg.	X
Beall	X

Some were more aware of goals for subjective type reasons.

2A. Was your role in the selection and monitoring of students made clear to you? YES

2B. How can the selection process be improved?

Principal suggests those students who can benefit most i.e. Those who are academically prepared.
Concerned with academic arrangement in EBCE (no provision for science lab experiences.

One principal was against random selection i.e. it gave dissallusionment, because only a small percent make the program.

The selection should include communication of results of program.

Choose students in more objective fashion (could still be random).

There is a definite need to involve guidance counselors in the selection process.

3. Did the EBCE staff provide you with adequate information for you to direct students into the program? YES

4. Do you feel this program, as designed, is a viable form of alternative education?

(a) In academics:

"Academic end of program not usable - no knowledge."

"Would like to drop in on L-C and check on his student on way program works)."

"Needs periodic evaluation."

"The 12-1 ratio with the L-C was enviable."

"Definite reservations on substance and quality regarding lab use."

"There could be a halo effect - student could be motivated to do well by his being singled out."

(b) In career development:

Yes

"Sites could be more flexible i.e. allow more activities."

Length of time at site should vary with complexity of work situation - for some sites less than 1 semester is necessary and a whole semester is boring - whereas a few weeks in duration is adequate - for some and would be to short for others.

5. The ratio of 4 days out and 1 day in is the present schedule; Do you feel there is need of some modification? Why?

"Insufficient information for feedback."

"May not be adequate time for student that isn't academically inclined to excell in short period of instruction."

6. What type of logistical (schedule wise, transportation, etc.) problems did the program present to you as a building principal?

For transporation; "None what so ever."

For activities;
of schools "During school hours transportation to school activity is a problem, the student is not informed of key events or graduation or caps/gowns."

7. Did the EBCE staff: Definitely no.

	Never	Infrequent/Sometimes	Daily/Always
Show you the Student Activity Sheet(s)	XX		
Show you the Student Program Profile	XX		
Show you the type of products expected from student	XX		
Explain reason for the particular placement	XX		
Provide you with feedback on student's progress	XX		

One Principal "Would like notification on change of job site for his students."
"Want progress reports preferably monthly on students progress at sites and academically - so as to notify parents of student difficulty or progress."

8. How do you perceive the opinion of your faculty toward the program?

"Majority are in favor of the program."
"However at one school they were unaware of the program."
"(Need to have more communication between program and faculty and administration to keep the home schools aware of students progress)."

9. What type of student was enrolled?

"No universal opinion was generated; some say only best, or those more likely to obtain the most."

10. Wnat type of student should be enrolled?

One felt student should be goal oriented individualistic type student and must also have parental support.

11A. Would you recommend this program to another principal? "Yes" - XX

11B. What modifications would you recommend to the principal? "None"

12. Is your position on the Advisory Council necessary?

"Yes, if for no other reason that to represent my school."

13. Do you feel the program received adequate support from the central administration? "Yes."

14. Do you feel this program meets the needs of your students?

Redundant yes - At one school the principal attributed that the program was responsible for a student graduating from school.

15. Have you received direct feedback from parents of participating students? If yes what was its nature?

Yes & no (parents did not call or meet with principal concerning their son/daughter. Teacher parent asked.

16. Have you received direct feedback from participating employers? If yes, what was its nature?

No, due to lack of feedback or information.

17. Do you feel that the program should be expanded to include sophomores and juniors?

"Sophomores are not mature enough."
"Juniors would encounter scheduling difficulties "advance planning difficulties."
No, No, No -(on a semester basis for Jr. only).
Three indicated a definite "NO."
On one exception "A semester basis for juniors only," was proposed by one principal.

18. What is an appropriate length of time for a student to participate in the program? _____6 weeks _____9 weeks _____semester _____years.

Most favor a year, but strong support is lacking - one in particular would still favor a semester in duration, two are leary of a whole year.

19. Should the system include a procedure for allowing students to return to the regular program if they wish?

Yes, but individual instruction and teachers in the system probably wouldn't permit it.

20. Additional Comments:

Many principals were concerned with the per pupil expenditures - county probably wouldn't pick up at end of 3 years.

SUMMARY OF SCHOOL COUNSELOR INTERVIEWS

At the end of the first year of the project, a guidance counselor was interviewed at each of the six participating schools. A summary of the six impressions is presented and is categorized under the following headings: School Counselor Involvement, Impact of EBCE on the Students, Selection Process and Type of Students Enrolled, during the 1976-77 year, and Type of Student who should be enrolled during the 1977-78 year.

Involvement of the School Counseling Staff in the EBCE Program

Five of the six counselors indicated that their direct involvement in the program was limited to the dissemination of information to their respective senior class prior to the selection and enrollment of the participating students and providing further information about the EBCE experience to those students who expressed an interest. Two of the counselors indicated they were provided with adequate information to direct students into the program. However, two of the four counselors indicating a need for greater information qualified their response by noting that it was the first year of a pilot project. It was apparent from the interviews that the counselors had little or no direct contact with the participating students once these students were enrolled in the program. Questions regarding degree and amount of communication that occurred between the counselors and EBCE staff produced a mixed response. Following is displayed the number of counselors indicating the type and frequency of information that was shared between the counselor and EBCE.

Type of Information		Frequency	
	Never	Infrequent/Sometimes	Daily/Always
Student Activity Sheet	2	2	1
Student Program Profile	2	3	
Type of Products expected from Student	2	1	2
Reason for the particular Placement	2	1	2
Feedback on Student's Progress	2	1	2

All of the counselors reported that the amount of input they provided regarding the implementation of the program was adequate. However, four of the counselors desired more input and feedback relating to the progress of individual students.

Opinions Regarding the Impact of EBCE on Students

All of the counselors expressed enthusiastic support for career education in general and the notion of experience based career education in particular. They agreed that the EBCE program as designed provided more career orientation activities than a traditional or resource oriented school counseling and guidance service. While the school counselors could not comment directly on the quantity or quality of the counseling offered to the students in personal growth and development, several commented positively about the personal growth exhibited by certain students in dealing with parental, peer and other interpersonal relationships as a result of the program.

The impact of program participation on the students' social and extra curricular activities varied across schools according to the responses of the counselors. This variation ranged from no impact or limitation on the students social and extra-curricula activities to forcing the participating students to choose between memberships in certain school organizations and EBCE participation. It would appear from the counselors' comments that the impact of program participation on such activities was largely a result of the policy established by the principal at each result of the policy established by the principal at each of the participating schools. For example, one counselor claimed that his principal would not allow his students to participate if the program interferred in any way with the students' participation in school activities. At another school, it was indicated that the principal had little concern for how the students accommodated program participation and school participation. Of particular concern, was how students could schedule activities that occurred during the school day e.g. drama, chorus, or band. All of the counselors commented on the difficulty in communication of information of special interest to seniors due to the participating students being out of the school four days a week.

In addition to the impact of participation on the social and extra-curricular activities of the students, the counselors also reported some difficulty in accommodating the EBCE and certain academic subjects. This accommodation was especially difficult for those seniors who were in college preparatory courses that required labs or advanced instruction such as biology or physics.

Generally, all of the counselors felt that the advantages of program participation for outweighed the disadvantages for the students from their respective schools. This conclusion on the part of the counselors was further supported by their reports of feedback they received from the parents and employers of the students. Two typical comments from two different schools which the counselors attributed to parents were:

> "best damn program they've ever come up with"
>
> "our son as completely turn around (for the better) as a result of this program"

Counselor Comments Regarding the Selection Process and Type of Students Selected

Due to the importance of how and what types of students were selected from both a programatic and research point of view, the opinions of the counselors were probed rather extensively during the interview. The central questions in these two areas included: How were the participating students selected? How can the selection process be improved? What type(s) of student was enrolled in the program? and What type(s) of student should be enrolled?

How Students Were Selected

It is apparent from the comments of the counselors that the process by which students were selected as participants varied slightly across the six schools. In general, the process began with mass informational meetings being held for each senior class. Interested students were asked to register with their guidance counselor. This resulted in 209 students indicating an interest in the program. Each interested student was requested to inform their parents of the program and return to the school a form indicating the parents permission to participate in the program. Once the self-selection stage was completed, the compiled list of interested students at each school was scrutinized by the principal and guidance counselor at each school. The surviving students were further screened by the Director of the project Ms. Dana George. Following this screening a pool of 140 students remained; from which four participants, two alternates, and six control students were randomly selected. At least two deviations of this process were mentioned by the counselors. One irregularity involved the selection of two students for "political" reasons and another involved the selection of the participating students at on school by the principal.

While recognizing the need for random selection for research purposes, several of the counselors stated that random selection did present some programatic problems. One problem with random selection was that certain students were selected to participate although their history of inappropriate behavior identified them as "risks" at best. Another problem mentioned by the counselors was the impact of having a small number of students selected (four) from as many as 25-30 interest students. Apparently many students were discouraged by the low probability of being selected.

The evaluators were interested in discovering why a much smaller number of students indicated an initial interest for the 1977-78 year than the past year. The counselors concurred that the reasons for the smaller number of interested students were in order of inpact.

1. A much softer sell was used in presenting information to this years juniors. Mass meetings were not used and dissemination of information relied on a memio that was sent to juniors plus word of mouth by this past years participants.
2. The fact that participation in the program was to be the whole year discouraged some students who did not want to spend their entire senior year out of the wchool.
3. The loss of social and extra-curricula activity for an entire year discouraged some students.
4. The inability to take certain college preparatory lab courses e.g., advanced biology, physics, etc. discouraged some students.
5. The random selection discouraged certain students who felt the small chance of being selected was not worth the problems that were involved in making schedule arrangements.

All of the counselors were emphatic in stating that negative feedback about this years EBCE was not a reason for the lower number of interested students since this years EBCE students were very positive about their experience. In fact, several participating students had volunteered to discuss their experiences with this year juniors.

Improvement of the Selection Process

As indicated, several counselors felt the random selection of students was inappropriate for programtic reasons. Half of the counselors felt that they should have greater input in the selections and screening of participating students. All but one of the counselors indicated a need for teacher input into the selection process. Two counselors saw a need to include the Site Analyst and Learning Coordinators in the selection process and interviews. The counselors also wanted the final selection of students to occur during the first part of May to facilitate the scheduling of courses. At present, the 1977-78 EBCE students are not notified until after the 1976-77 school year is over. This necessitates interested students in registering for two different course schedules.

Type of Students Enrolled During the 1976-77 Year

It appears from the comments of the counselors that the type of students who participated in the program represented a broad spectrum of past high school plans and rigidity of career plans. Some students were college bound and were committed to further professional education such as low. Other students were to begin full time employment immediately after graduation. All of the counselors were of the opinion that the vast majority of students were in the upper 50% of their class and that several students were in the upper third of their class academically. Only a few students were considered to be borderline academics and no students were felt to be poor academic students. The counselors reported that all participating students were of average or above average intelligence. Of the six counselors, only one indicated awareness of one student who was identified as a behavior problem. All counselors concurred that the EBCE students from their respective schools represented students with firm career plans and students with indefinite career plans. By and large the participating students were thought to be motivated to succeed and goal oriented.

Type of Student Who Should Be Enrolled

A composite of the student who would benefit from EBCE would include a student who is motivated and goal oriented, who is of average or above average intelligence and who has demonstrated at least average academic ability. The counselors were of the opinion that EBCE could benefit both the student who has definite career plans and wish to gain experience in a chosen career prior to engaging in advanced training or education or the student who is still exploring various career prior to deciding on a particular career to pursue.